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ABSTRACT

Since 1975, the Monitoring the Future project has provided the nation with an important window through which to view the rapidly changing problems of drug use among American youth. This latest two-volume monograph reports the results of the twenty-seventh (2001) national survey of drug use and related attitudes and beliefs among American high school seniors. Results from the secondary school samples of eighth, tenth, and twelfth graders are contained in Volume I. It reports the results of the national survey of drug use and related attitudes and beliefs among 8th, 10th, and 12th graders. Distinctions are made among important demographic subgroups in these populations based on gender, college plans, region of the country, population density, parents' education, and race and ethnicity. Following the introductory chapter, chapter 2 presents key findings. Study design is reviewed in chapter 3. Chapters 4 and 5 explain the prevalence and trends in drug use. Chapter 6 discusses the initiation rates by grade level. Chapter 7 explains the degree and duration of drug highs. Chapter 8 discusses attitudes about drug use, and chapter 9 reviews the social milieu. Chapter 10 sums up other findings from the study. Volume 1 was preceded by an advance summary publication of its key findings. (Contains 5 appendixes, 128 tables, and 94 figures.) (GCP)

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National Institute on Drug Abuse

Monitoring the Future

National Survey Results on Drug Use, 1975-2001

Volume I:

Secondary School Students

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MONITORING THE FUTURE

NATIONAL SURVEY RESULTS ON DRUG USE, 1975-2001

Volume I

Secondary School Students

by

Lloyd D. Johnston, Ph.D.
Patrick M. O'Malley, Ph.D.
Jerald G. Bachman, Ph.D.

The University of Michigan
Institute for Social Research

National Institute on Drug Abuse
6001 Executive Boulevard
Bethesda, Maryland 20892

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Chapter 1

INTRODUCTION

The last third of the twentieth century saw an epidemic of illicit drug use among American young people that is unparalleled in this country's history. This epidemic subsided considerably from the late 1970s through the early 1990s: but there was an important relapse in the epidemic during much of the 1990s. Widespread alcohol and tobacco use among our youth also have become issues of increasing public concern and policy attention, given the consequences of these drugs for both young people as well as the rest of society. Both of these behaviors also saw some resurgence in the 1990s, particularly cigarette smoking.

Since 1975, the Monitoring the Future project has provided the nation with an important window through which to view these rapidly changing problems and thus enabled it to get a better understanding of their changing nature and some of the dynamics that explain them. This series of annual monographs has been the primary vehicle for disseminating many of the epidemiological findings from the study, and the monographs have grown substantially over the years in both coverage and size.

This latest two-volume monograph reports the results of the twenty-seventh (2001) national survey of drug use and related attitudes and beliefs among American high school seniors, the twenty-second such survey of American college students, and the eleventh such survey of eighth- and tenth-grade students. Results from the secondary school samples of eighth, tenth, and twelfth graders are contained in Volume I, while the results from college students and young adults (up to age 40) are reported in Volume II. Volume I, dealing with secondary school students, is preceded by an advance summary of its key findings, *Monitoring the Future National Results on Adolescent Drug Use: Overview of Key Findings, 2001.*[1] That report, which contains a short section on each of the major classes of drugs under study, can be viewed on the Web at http://www.monitoringthefuture.org or obtained free of charge by contacting the authors at the Institute for Social Research, The University of Michigan, Ann Arbor, Michigan, 48106-1248.

Monitoring the Future: A Continuing Study of American Youth is conducted at the University of Michigan's Institute for Social Research and has been funded since its inception through a series of investigator-initiated research grants from the National Institute on Drug Abuse. In the early years the study was often called the National High School Senior Survey because each year since 1975 a representative sample of all seniors in public and private high schools in the coterminous United States has been surveyed. However, the study also surveys (a) representative samples of eighth- and tenth-grade students, (b) representative samples of young adults from previous graduating classes, who are administered follow-up surveys by mail, and (c) representative samples of American college students one to four years past high school, who are a part of these follow-up samples.

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[1] Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (2002). *Monitoring the Future National Results on Adolescent Drug Use: Overview of Key Findings, 2001* (NIH Publication No. 02-5105). Bethesda, MD: National Institute on Drug Abuse, 57 pp.

SURVEYS OF SECONDARY SCHOOL STUDENTS

Two of the major topics included in this series of annual reports are (1) the prevalence and frequency of drug use among American secondary school students (specifically, in eighth, tenth, and twelfth grades) and (2) trends in use by those students. Distinctions are made among important demographic subgroups in these populations based on gender, college plans, region of the country, population density, parents' education, and race/ethnicity. Data on grade of first use, trends in use at lower grade levels, and intensity of drug use also are reported in three separate chapters. Key attitudes and beliefs about use of the various drugs have been demonstrated by this study to be important determinants of trends in use over time. Therefore, they are also tracked over time, as are students' perceptions of certain relevant aspects of the social environment—in particular, perceived availability, peer norms, use by friends, and exposure to use.

SURVEYS OF COLLEGE STUDENTS AND YOUNG ADULTS GENERALLY

Also included in this report series are findings on the prevalence and trends in drug use among young adults who have completed high school. These data are reported primarily in Volume II, although a brief summary of them is given in Chapter 2 of this volume, "Overview of Key Findings." The period of young adulthood (here defined as late teens to early thirties) is particularly important because it has tended to be the period of peak use for many drugs.

The Monitoring the Future study design calls for biennial follow-ups—through age 32—of a subsample of the participants in each participating senior class, beginning with the class of 1976. In 2001, representative samples of the graduating classes of 1987 through 2000, corresponding to modal ages of 19 to 32, provided the panel data. Because the same questionnaire forms are used in each of these follow-ups, it is possible to integrate the data across this age band. Comprehensive results from this young adult population are presented in Volume II.[2]

Two chapters in Volume II present data on college students specifically. Trend data are provided since 1980, the first year that a national sample of college students one to four years past high school was available from the follow-up survey. College students have not usually been well represented in national household surveys because many college students live on campus in group dwellings (dormitories, fraternities, and sororities) that often are not included in household surveys. (The National Household Survey on Drug Abuse, conducted in earlier years by NIDA and now by the Substance Abuse and Mental Health Services Administration, was revised in 1991 to include such group dwellings.) Twenty-two surveys on substance use among American college students have now been completed, encompassing a twenty-one-year period.

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[2] Older cohorts are now followed up again at ages 35 and 40 using somewhat different questionnaires.

CONTENT AREAS COVERED IN THIS REPORT

Initially, 11 separate classes of drugs were distinguished for this series of reports: marijuana (including hashish), inhalants, hallucinogens, cocaine, heroin, opiates other than heroin (both natural and synthetic), stimulants (more specifically, amphetamines), sedatives, tranquilizers, alcohol, and tobacco. This particular organization of drug use classes was chosen to heighten comparability with a parallel series of publications based on the National Household Survey on Drug Abuse. Separate statistics also are presented for several subclasses of drugs within these more general classes: PCP and LSD (both hallucinogens), barbiturates and methaqualone (both sedatives), the amyl and butyl nitrites (a class of inhalants), crystal methamphetamine ("ice"), and crack and other cocaine. A number of these drugs appeared on the American scene after the study began and were added to the twelfth-grade questionnaires in subsequent years. Trend data for PCP and nitrites are available since 1979, when questions about the use of these drugs were added to the study because of increasing concern over their rising popularity and possibly deleterious effects. For similar reasons, a single question about crack cocaine was added to the 1986 survey, and more detailed questions on crack and other cocaine were added in 1987.

Questions about methylenedioxymethamphetamine (MDMA), or "ecstasy," were added in 1989 to the follow-up surveys only and in 1996 to the eighth-, tenth-, and twelfth-grade surveys. Questions about crystal methamphetamine ("ice") were added in 1990. Barbiturates and methaqualone, two components of the sedative class as used here, have been measured separately from the outset. Data for them are presented separately because their trend lines have proven to be quite different. Questions about anabolic steroids were added in 1989 because of reports of their increasing illicit use among young people. Questions about smokeless tobacco were added in 1986, while cigarette use has been covered since the study's inception. In 1991 questions about "getting drunk" were added to the long-standing set of questions on alcohol use. A question about Rohypnol was added to the secondary school questionnaires in 1996. Special questions on the use of heroin by injection, as well as by means other than injection, were added in 1995, as use by means other than injection appeared to be rising. The 1999 survey incorporated new questions on the use of methamphetamines, and the 2000 survey added questions on the use of two additional "club drugs," GHB and ketamine, as well as bidis (a type of flavored cigarette). Obviously, as time passes and new trends develop, additional drugs will have to be added to the study's coverage.

For drugs other than alcohol, cigarettes, smokeless tobacco, inhalants, and nonprescription stimulants, practically all of the information reported here deals with illicit use of controlled substances. Respondents are asked to exclude any occasions on which they used any of the psychotherapeutic drugs under medical supervision. (Some data on the medically supervised use of such drugs are contained in the full 1977, 1978, 1981, and 1983 volumes in this series, and an earlier article discussed trends in the medical use of these drugs.[3])

Throughout this report we have chosen to focus attention on drug use at the higher frequency levels rather than simply to report proportions that have ever used various drugs. This is done to help differentiate levels of seriousness, or extent, of drug involvement. While there is no public consensus on what levels or patterns of use constitute "abuse," there is surely a consensus that higher levels of use are more likely than lower levels to have detrimental effects for the user and society. We have also introduced indirect measures of dosage per occasion by asking respondents the duration and intensity of the highs they usually experience with each type of drug. They have shown some interesting trends over the years. Chapter 7 reports those results.

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[3] Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1987). Psychotherapeutic, licit, and illicit use of drugs among adolescents: An epidemiological perspective. *Journal of Adolescent Health Care, 8*, 36-51.

For both licit and illicit drugs, separate chapters are devoted to various variables: grade of first use; the students' own attitudes and beliefs; related attitudes, beliefs, and behaviors of others in their social environment; and perceived drug availability. Some of these variables have served to explain observed secular trends in use.

Chapter 10, "Other Findings from the Study," discusses use of nonprescription stimulants, including diet pills, stay-awake pills, and the "look-alike" pseudo-amphetamines. Questions on these substances were placed in the survey beginning in 1982 because the use of them appeared to be on the rise and because it appeared that some respondents inappropriately included them in their answers about amphetamine use. That inappropriate inclusion affected some of the observed trends in amphetamine use until the clarification in 1982.

Chapter 10 also presents trend results from a set of questions about cumulative lifetime marijuana use at a daily or near-daily level. These questions were added to enable us to develop a more complete individual history of daily use over a period of years. They reveal some interesting facts about the frequent users of this drug. Also included in Chapter 10 are synopses of a number of other publications that have emanated from the study over the past year.

This volume contains an appendix on how to calculate confidence intervals for point estimates and how to calculate statistics testing the significance of changes over time or of differences between subgroups. While many tables in these volumes already contain such statistics for selected point estimates and selected change intervals, some readers may wish to conduct additional computations. Appendix C provides the necessary formulas and design effect corrections to permit such computations.

The reader's attention is also called to Appendix D, which presents supplementary tables providing cross-time trends in the use of various drugs for a number of demographic subgroups in the population. Specifically, subgroups are differentiated on the basis of gender, college plans, region of the country, size of the community, education level of the parents (a proxy for socioeconomic status), and racial/ethnic group. The tables document a number of important subgroup differences in both levels of drug use and cross-time trends in drug use.[4] Appendix B supplies the exact definitions used to distinguish these various subgroups. Appendix E provides trends (for twelfth grade only) on individual drugs within the following general classes: hallucinogens other than LSD, amphetamines, tranquilizers, and opiates other than heroin.

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[4] Graphic presentations of these trends among the various demographic subgroups are available on the study's Web site (www.monitoringthefuture.org) under Occasional Paper No. 57, which is listed under "Publications." (Johnston, L. D., O'Malley, P. M., and Bachman, J. G. (2002). *Demographic subgroup trends for various licit and illicit drugs, 1975-2001*. (Monitoring the Future Occasional Paper No. 57). Ann Arbor, MI: Institute for Social Research.

PURPOSES AND RATIONALE FOR THIS RESEARCH

Perhaps no social problem has proven more clearly appropriate for the application of systematic research and reporting than that of substance abuse. Many of these behaviors are hidden from public view; also many of them have changed rapidly and frequently. They are of great importance to the well-being of the nation, and many legislative and programmatic interventions are addressed to them, particularly in response to the increases in adolescent smoking and illicit drug use we had been reporting in the 1990s.

Young people are often at the leading edge of social change—and this has been particularly true of drug use. The massive upsurge in illicit drug use during the last thirty or thirty-five years has proven to be a youth phenomenon, and the "relapse" in the drug epidemic in the early 1990s occurred almost exclusively among adolescents, as this study has demonstrated. Adolescents and young adults in their twenties also fall into the age groups at the highest risk for illicit drug use. The original epidemic began on the nation's college campuses and then spread downward in age, but the more recent relapse phase in the epidemic manifested itself first among secondary school students and then started moving upward in age as those cohorts matured. From one year to the next, particular drugs rise or fall in popularity, and related problems occur for youth, their families, governmental agencies, and society as a whole.

One of the many important purposes of the Monitoring the Future series is to develop an accurate picture of current drug use and trends in that use. This is a formidable task, given the illegal nature of most of the phenomena under study. A reasonably accurate picture of the basic size and contours of the illicit drug use problem among young Americans is a prerequisite for rational public debate and policymaking. In the absence of reliable *prevalence* data, substantial misconceptions can develop and resources may be misallocated. In the absence of reliable data on *trends*, the early detection and localization of emerging problems are more difficult and societal responses more lagged. We believe that Monitoring the Future played an important role in establishing early that cigarette smoking among American adolescents was rising sharply in the 1990s, a fact that helped to encourage and buttress some extremely important policy initiatives that culminated in the tobacco settlement. More recently MTF has documented and described the sharp rise in ecstasy use.

In addition, assessments of the impact of major historical and policy-induced events are much more conjectural without good trend data. Finally, the accurate empirical comparison of subgroup differences has challenged conventional wisdom in some important ways.

The Monitoring the Future study also monitors a number of factors that we believe help *explain* the changes observed in drug use. Many are discussed in this series of volumes. They include peer norms regarding drugs, beliefs about the dangers of drugs, and perceived availability. In fact, monitoring these factors has made it possible to examine a central policy issue in this nation's war on drugs—namely, the relative importance of supply factors versus demand factors in bringing about some of the observed declines (and more recently, increases) in drug use. We also have developed a general theory of drug epidemics that makes use of many of these concepts to explain the rises and declines that occur in use.[5]

In addition to assessing prevalence and trends accurately and trying to determine their causes, the Monitoring the Future study has a substantial number of other important research objectives. Among these are 1) helping to determine which young people are at the greatest risk for developing various patterns of drug abuse; 2) gaining a better understanding of the lifestyles and value orientations associated with various patterns of drug use, and monitoring how subgroup differences and lifestyle orientations are shifting over time; 3) determining the immediate and more general aspects of the social environment associated with drug use and abuse; 4) determining how major transitions in social environment (entry into military service, civilian employment, college, homemaking, and unemployment) or in social roles (engagement, marriage, pregnancy, parenthood, divorce, and remarriage) affect drug use; 5) determining the life course of the various drug-using behaviors from early adolescence to middle adulthood and distinguishing such "age effects" from cohort and period effects in determining drug use; 6) evaluating possible explanations of period and age effects, including determining the effects of social legislation on various types of substance use; 7) examining possible consequences of using various drugs; and 8) determining the changing connotations of drug use and changing patterns of multiple drug use among youth.[6] We believe that the differentiation of period, age, and cohort effects in substance use of various types has been a particularly important contribution of the project, and it is one that the project's cohort-sequential research design is especially well suited to make. Readers interested in publications dealing with any of these other areas should write the authors at the Institute for Social Research, The University of Michigan, Ann Arbor, Michigan, 48106-1248, or contact us through the study's Web site.

WEB SITE

Up-to-date information about the study may be found on the Monitoring the Future Web site at: http://www.monitoringthefuture.org. This site contains a full listing of all publications from the study, including the full texts and/or the abstracts of many, as well as the full text of all press releases.

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[5] See Johnston, L. D. (1991). Toward a theory of drug epidemics. In R. L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 93-132). Hillsdale, NJ: Lawrence Erlbaum.

[6] For an elaboration and discussion of the full range of Monitoring the Future research objectives in the domain of substance abuse, see Johnston, L. D., O'Malley, P. M., Schulenberg, J. and Bachman, J. G. (2001). *The aims and objectives of the Monitoring the Future study and progress toward fulfilling them as of 2001*. (Monitoring the Future Occasional Paper No. 52). Ann Arbor, MI: Institute for Social Research.

Chapter 2

KEY FINDINGS:

AN OVERVIEW AND INTEGRATION ACROSS FIVE POPULATIONS

Monitoring the Future has become one of the nation's most relied-upon sources of information changes in psychoactive drug use among American adolescents and young adults. Over the past quarter century, the study has tracked their use of an ever-growing array of such substances, both illicit and licit, and the list continued to grow this year.

This annual series of monographs, written by the study's investigators and published by its sponsor—the National Institute on Drug Abuse—is one of the major vehicles by which the epidemiological findings from the study are reported. The present two-volume monograph reports findings through 2001. (A companion series of annual reports provides a much briefer, advanced synopsis of the key findings from the latest surveys of secondary school students.[7])

Over its 27-year existence, Monitoring the Future has conducted in-school surveys of nationally representative samples of (a) high school seniors each year since 1975 and (b) eighth- and tenth-grade students each year since 1991. In addition, beginning with the class of 1976, follow-up surveys have been conducted by mail on representative sub-samples of the respondents from each previously participating twelfth-grade class.

A number of important findings have been summarized and integrated in this chapter so that the reader may quickly get an overview of the key results. Because so many populations, drugs, and prevalence intervals are discussed here, a single integrative set of tables (Tables 2-1 through 2-3) showing the 1991-2001 trends for all drugs on all five populations (eighth-grade students, tenth-grade students, twelfth-grade students, full-time college students ages 19-22, and all young adults through age 28 who are high school graduates) is included in this chapter. (Note that the young adult group includes the college student population.)

TRENDS IN ILLICIT DRUG USE

Early in the 1990s we noted an increase in the use of a number of illicit drugs among secondary students and some important changes among the students in terms of certain key attitudes and beliefs related to drug use. In the volume reporting 1992 survey results, we noted the beginning of such reversals in both use and attitudes among eighth graders, the youngest respondents surveyed in this study, and also a reversal in attitudes among the twelfth graders. Specifically, the proportions seeing great risk in using drugs began to decline, as did the proportions saying they disapproved of use. As we predicted, those reversals indeed presaged "an end to the improvements in the drug situation that the nation may be taking for granted." The use of illicit drugs rose sharply in all three grade levels after 1992, as negative attitudes and beliefs about drug use continued to erode. This pattern continued for some years.

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[7] Johnston, L. D., O'Malley P. M., & Bachman, J. G. (2002). *Monitoring the Future national results on adolescent drug use: Overview of key findings, 2001*. (NIH Publication No. 02-5105). Bethesda, MD: National Institute on Drug Abuse. (Also available on the Web at www.monitoringthefuture.org.)

In 1997, for the first time in six years, illicit drug use finally began to decline among eighth graders. Use of marijuana continued to rise among tenth and twelfth graders, although their use of a number of other drugs leveled off and relevant attitudes and beliefs also began to reverse in many cases. In 1998, illicit drug use continued a gradual decline among eighth graders and started to decline at tenth and twelfth grades. In 1999, 2000, and 2001 the decline continued for eighth graders while use held fairly level among tenth and twelfth graders. The fact that use continues to decline steadily, albeit slowly, among the eighth graders bodes well for an eventual further decline at the upper grades.

- As subsequently illustrated in discussion of specific drugs, the increase in use of many drugs during the 1990s among secondary school students, combined with fairly level rates of use among college students and young adults, resulted in some unusual reversals in the usage rates by age. In the early years of the epidemic, illicit drug use rates clearly were higher in the college-age group (and eventually the young adults) than they were among secondary school students. But by the late 1990s, the highest rates of active use (i.e., annual or 30-day prevalence) tended to be found in the late secondary school years. For example, in 2001, 30-day prevalence of using ***any illicit drug*** is highest in twelfth grade (26%), second highest in tenth grade (23%), third highest among college students (22%), fourth highest among 19- to 28-year-olds (19%), and lowest among eighth graders (12%). When it comes to using ***any illicit drug other than marijuana*** in the past 30 days, the rank order is as follows: twelfth grade (11%), tenth grade (9%), college students (8%), 19- to 28-year-olds (7%), and finally eighth graders (6%). As can be seen, usage rates among tenth and twelfth graders are considerably higher than among young adults and even higher than the college-student segment of the young adult population.

- Until 1997, ***marijuana*** use rose sharply among secondary school students, and their use of a number of ***other illicit drugs*** also rose, though more gradually. An increase in marijuana use also has occurred among American college students, no doubt due largely to "generational replacement," wherein earlier graduating high school class cohorts were replaced in the college population by more recent ones who were more drug experienced before they left high school. A resurgence in illicit drug use spreading *up* the age spectrum is a reversal of the way the epidemic spread several decades earlier. In the 1960s the epidemic began on the nation's college campuses, and then the behavior diffused downward in age to high school students and eventually to junior high school students. This time the increases began in middle schools and radiated up the age spectrum.

The increases in use of ***marijuana*** and of ***other illicit drugs*** taken as a class, were substantially larger, in both proportional and absolute terms, in the three secondary school grades than in either the college or young adult populations. In fact, at present there still is rather little increase in illicit drug use in the young adult population of 19- to 28-year-olds. From 1991 through 1997, their annual prevalence of use of ***any illicit drug*** held remarkably stable at the same time that adolescent use rose appreciably. We believe that, as generational replacement continues to occur, we will likely see some increase in use of illicit drugs by the young adults. In fact, some of that appears to have happened among college students, whose annual prevalence of marijuana use peaked a year later than among twelfth graders and whose 30-day prevalence peaked two years later. Their use of any illicit drug other than marijuana continued to rise through 2001, whereas use by twelfth graders peaked in 1997.

These diverging trends across the different age groups show that changes during the 1990s reflected some cohort effects—lasting differences between class cohorts—rather than broad secular trends, which would appear simultaneously in all of the age groups covered by the study. All during the previous 15 years of the study, the use of most drugs moved in parallel across most age groups, indicating secular change.

- A somewhat parallel finding occurred for ***cigarette*** smoking, in that college students showed a sharp increase in smoking, beginning in 1995, no doubt reflecting a generational replacement effect. (Smoking had been rising among high school seniors since 1992.) This has been a more typical pattern of change for ***cigarettes***, however, since differences in cigarette smoking rates among class cohorts tend to remain through much or all of the life cycle and also tend to account for much of the overall change in use observed at any given age. The increase in current smoking ended among eighth and tenth graders in 1996, among twelfth graders in 1997, but not among college students until 1999. The appreciable decline in the smoking rate that began among the eighth graders appears to be radiating up the age spectrum as they get older. (Their 30-day prevalence rate has fallen from 21% in 1996 to 12% in 2001.) In the early 1990s smoking among eighth and tenth graders had risen by about 50%—a particularly sharp and concerning rise.

- ***Marijuana*** use, which had been rising sharply in all three grades of secondary school during the early to mid-1990s, began to turn downward in 1997 among eighth graders and then did the same in 1998 among tenth and twelfth graders. Only the eighth graders showed a continuation of this decline in 2000, however. In 2001, use remained level in all three grades. In the 1990s, the annual prevalence of marijuana use (i.e., the percent reporting any use during the prior twelve months) tripled among eighth graders (from 6% in 1991 to 18% in 1996), more than doubled among tenth graders (from 15% in 1992 to 35% in 1997), and grew by nearly three-quarters among twelfth graders (from 22% in 1992 to 39% in 1997). Among college students, however, the increase in marijuana use, presumably largely due to a "generational replacement effect," was much more gradual. Annual prevalence rose by about one-third from 27% in 1991 to 36% in 1998, before beginning to level. Among young adults there so far has been even less change, from 24% in 1991 to 29% in 2001, with no decline yet.

Daily marijuana use rose substantially among secondary school and college students between 1992 and 2000, but somewhat less so among young adults (see Table 2-3). In 2001, the increase in daily use continued for the tenth graders but halted for the eighth and twelfth graders. Nearly 1 in 17 (5.8%) twelfth graders is now a current daily marijuana user. Still, this rate is far below the 10.7% peak figure reached in 1978. Daily use among eighth graders is considerably lower, at 1.3%. In 2001 daily marijuana use among all five populations was at, or very close to, the peak level since the beginning of the 1990s.

The amount of risk associated with using marijuana fell during the earlier period of increased use and again during the more recent resurgence of use in the 1990s. Indeed, at tenth and twelfth grades, perceived risk began to decline a year ***before*** use began to rise in the upturn of the 1990s, making perceived risk a leading indicator of change in use. (The same may have happened in eighth grade, as well, but we do not have data starting early enough to check that possibility.) The decline in perceived risk halted after 1997 in eighth and tenth grade, and use began to decline a year or two later. Again, perceived risk was a leading indicator of change in use.

Personal disapproval of marijuana use slipped considerably among eighth graders between 1991 and 1996 and among tenth and twelfth graders between 1992 and 1997. For example, the proportions of eighth, tenth, and twelfth graders who said they disapproved of trying marijuana once or twice fell by 17, 21, and 19 percentage points, respectively, over those intervals of decline. There has since been a little increase in disapproval among eighth and tenth graders, but among twelfth graders there was some decline in disapproval in 2001.

- Among seniors, the proportions using ***any illicit drug other than marijuana*** in the past year rose from a low of 15% in 1992 to 21% in 1997. (This recent peak in 1997 was substantially below the 34% peak rate in 1981.) In fact, all of the younger groups showed significant increases (though not as large in proportional terms as for marijuana). Use of any illicit drug other than marijuana began to increase in 1992 among eighth graders, in 1993 among tenth and twelfth graders, and in 1995 among college students—again reflecting evidence of a cohort effect.

Use peaked in 1996 among eighth and tenth graders and by 1997 among twelfth graders, but it has yet to peak among the college students and young adults. The eighth graders have shown some gradual decline in their use of the other illicit drugs, taken as a class, since 1996; but the brief period of decline among tenth graders ended after 1998.

- Between 1989 and 1992 we noted an increase among high school seniors, college students, and young adults in their use of ***LSD***, a drug most popular in the late 1960s and early 1970s. By 1992, the newly added populations (eighth and tenth graders) were also showing an increase in LSD use; and for several more years, modest increases persisted in all five populations. Use of LSD among college students and young adults was the first to peak, in 1995. Use in all three grades of secondary school peaked a year later. Since those peak years in the mid-1990s, there has been some decline in the relatively low rates of LSD use across the board.

  Prior to the significant increase in LSD use among seniors in 1993, there was a significant 4.3 percentage point decline between 1991 and 1992 in the proportion seeing great risk associated with trying LSD. (Once again this belief proved a leading indicator of change in use.) The decline in perceived risk continued through 1997 and halted in 1998. The proportion of seniors disapproving of LSD use also began to decline in 1992 and continued through 1996.

  Because LSD was one of the earliest drugs to be popularly used in the overall American drug epidemic, there is a distinct possibility that young people—particularly the youngest cohorts, like the eighth graders—are not as concerned about the risks of use. They have had less opportunity to learn vicariously about the consequences of use by observing others around them or to learn from intense media coverage of the issue, which occurred some years earlier. We were concerned that this type of "generational forgetting" of the dangers of a drug, which occurs as a result of generational replacement, could set the stage for a whole new epidemic of use. In fact, perceived harmfulness of LSD began to decline after 1991 among seniors. These measures for risk and disapproval were first introduced for eighth and tenth graders in 1993 and both measures dropped until 1997 or 1998, after which perceived risk and disapproval leveled (or declined some). Because the decline in use in the last few years has *not* been accompanied by expected changes in these attitudes and beliefs, we are inclined to think that there may be some displacement by another drug taking place. The most logical candidate is ***ecstasy***, which is also used for its hallucinogenic effects and which has been very much on the rise recently.

- Questions about the use of ***ecstasy*** (***MDMA***) have been included in the follow-up surveys of college students and young adults since 1989; however, because of our concern about stimulating interest in an attractive-sounding and little-known drug, these questions were not added to the secondary school surveys until 1996. From 1989 to 1994, the annual prevalence rates tended to be quite low in the older age groups for whom we had data, but in 1995 there was a substantial increase (from 0.5% to 2.4% among college students, and from 0.7% to 1.6% among young adults generally).

When data were first gathered on secondary school students in 1996, the tenth and twelfth graders showed higher rates of annual use (both 4.6%) than the college students (2.8%). Ecstasy use then fell steadily at all three grades between 1996 and 1998, though it did not fall in the older age groups. Since 1998 its use has risen sharply in all five populations. In fact, annual prevalence has more than doubled in that three-year period among twelfth graders, college students, and young adults and nearly doubled in the lower grades. In 2000 even the eighth graders showed a significant increase in use. Among the young adults, the increase in use has occurred primarily among those under age 29. The rates of annual prevalence in 2001 were: 4%, 6%, and 9% among eighth, tenth, and twelfth graders, respectively, 9% among college students, and 8% among all young adults.

There has been quite a dramatic increase in the reported availability of this drug in recent years, which seems to be substantiated by seizure data. As of 2000 there had been little increase in the perceived degree of risk associated with ecstasy. The mounting media attention to the drug and its consequences may be behind the dramatic increase in perceived risk of ecstasy use among the twelfth graders in 2001, as we predicted might occur. Disapproval, however, continued the gradual decline started in 1999. (Trend data is not available for eighth and tenth graders.)

- Between 1982 and 1992, annual prevalence rates for the use of ***amphetamines*** among seniors fell by nearly two-thirds, from 20% to 7%. Rates among college students fell even more over the same interval, from 21% to 4%. Annual use increased by about half among eighth and tenth graders between 1991 and 1996, and there were increases among twelfth graders and college students between 1992 and 1996. In 1997, use declined significantly among eighth graders and leveled among tenth graders, but use continued to increase among twelfth graders. After 1997, use continued to decline in eighth and tenth grade, before leveling in 2000, and remained fairly level at twelfth grade. Use continues to increase among college students and young adults, however, perhaps reflecting the effects of generational replacement.

  The increase in use of illicit amphetamines (and a decrease in disapproval) that began among seniors in 1993 followed a sharp drop in perceived risk a year earlier (which, as we have said, often serves as a leading indicator). Following a period of decline, disapproval and perceived risk associated with amphetamine use stabilized in 1997 among seniors, while use showed a leveling. In 1998, there was a bump up in perceived risk, but some correction back the next year. This general pattern of change is consistent with our theoretical position that perceived risk can drive both disapproval and use.

College students showed a modest increase in amphetamine use during the 1990s, but the absolute prevalence rates are only about half those for tenth and twelfth graders; and use among young adults generally is lower still and has changed rather little.

- ***Ritalin*** has been among the most widely reported specific amphetamines in recent years; its use increased among high school seniors from an annual prevalence of 0.1% in 1992 to 2.8% in 1997, before leveling. (See Appendix E, Table E-2.)[8] Use of ***ice (crystal methamphetamine)*** increased in the late 1990s but has declined some since 1998. ***Methamphetamine*** questions were introduced in 1999, and a modest decline was observed in its use among all five populations in 2000. However, by 2001 usage rates in all five populations have changed rather little since the first measurement point in 1999. The annual prevalence rates observed in 2001 for methamphetamine are 3%, 4%, 4%, 2%, and 3% among eighth graders, tenth grade, twelfth graders, college students, and all young adults, respectively.

- ***Inhalants*** constitute another class of abusable substances in which a troublesome increase (this time a longer-term one) was followed by a reversal among secondary school students. The reversal came after 1995 in this instance. Inhalants are defined as fumes or gases that are inhaled to get high, and they include common household substances such as glues, aerosols, butane, and solvents. One class of inhalants, ***amyl and butyl nitrites***, became somewhat popular in the late 1970s, but their use has been almost eliminated. For example, their annual prevalence rate among twelfth-grade students was 6.5% in 1979 but only 0.6% in 2001.

  When the nitrites are removed from consideration, it appears that all other inhalants, taken together, showed an upward trend in annual use until 1995. Largely prompted by reports of Monitoring the Future survey findings regarding the rise in inhalant use, the Partnership for a Drug-Free America launched an anti-inhalant ad campaign in mid-April of 1995. By the 1996 spring survey of eighth and tenth graders (twelfth graders are not asked about the dangers of inhalants), there was a sharp increase (of three to six percentage points, depending on the measure) in the percent who said that using inhalants carries great risk to the user. Inhalant use in all grades began to decline in 1996 and continued declining through 1999 in all grades, after a long and steady increase in the preceding years. This is all the more noteworthy because illicit drug use generally was still increasing in 1996 and (for the upper two grades) in 1997 as well. The gradual decline in inhalant use continued into 2001 in all five populations.

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[8] As is discussed in Appendix E, the absolute prevalence for ritalin is probably higher than these statistics indicate, but the trend story likely is quite accurate.

Some 9% of the 2001 eighth graders and 7% of the tenth graders indicated inhalant use in the prior 12 months, making inhalants the second most widely used class of illicitly used drugs for eighth graders (after marijuana) and the third most widely used (after marijuana and amphetamines) for tenth graders. Inhalants can and do cause death, which tragically, often occurs among those in their early teens. Because the use of inhalants decreases with age, this class of drugs shows an unusual pattern, with active use being highest among the eighth graders (9% annual prevalence in 2001) and lowest among the young adult population (annual prevalence of only 2% in 2001).

- ***Crack cocaine*** use spread rapidly from the early to the mid-1980s. Still, among high school seniors, the overall prevalence of crack leveled in 1987 at a relatively low prevalence rate (3.9% annual prevalence), even though crack use had continued to spread to new communities. Clearly it had quickly attained a reputation as a dangerous drug, and by the time of our first measurement of perceived risk in 1987, it was seen as the most dangerous of all of the drugs. Annual prevalence dropped sharply in the next few years, reaching 1.5% by 1991, where it remained through 1993. Perceived risk began what turned out to be a long and substantial decline after 1990. Use began to rise gradually after 1993, when it was 1.5%, to 2.7% by 1999, before finally declining in 2000.

Among eighth and tenth graders, crack use had risen gradually in the 1990s: from 0.7% in 1991 to 2.1% by 1998 among eighth graders, and from 0.9% in 1992 to 2.5% in 1998 among tenth graders. In 1999 there was a significant decrease in use among eighth graders while use among tenth graders leveled. In contrast, among young adults 1 to 10 years past high school, annual prevalence was only 1.3% in 2001, virtually unchanged since 1992. Nor was there much change in the low rates of crack use among college students during the 1990s. Except for the recent modest decline among eighth and tenth graders, there does not yet seem to be a turnaround (as we have seen for most other drugs) in the crack situation, and perceived risk continued to decline in 1999 at all grade levels. This pattern of an increase among younger age levels, but none among older ones, would be consistent with the notion that perceived risk eroded as generational replacement has taken place. Because the crack epidemic of the mid-1980s is not that far back, the older age groups may still remember the lessons learned during that historical period.

Among seniors in high school, annual crack prevalence among the college-bound is considerably lower than among those not bound for college (1.5% for college-bound versus 4.4% for noncollege-bound, in 2001).

We believe that the particularly intense and early media coverage of the hazards of crack cocaine likely had the effect of "capping" an epidemic early, by deterring many would-be users and by motivating many experimenters to desist use. As has been mentioned, when we first measured crack use in 1987, it had the highest level of perceived risk of any of the illicit drugs. Also, it did not turn out to be "instantly addicting" upon first-time use, as had been reported widely. While 3.7% of seniors in 2001 reported ever having tried crack, only 1.1% reported use in the past month, indicating that 70% of those who tried crack did not establish a pattern of continued use.

In 1993, the levels of perceived risk and disapproval associated with crack dropped in all three grade levels, foretelling the rise in use that occurred in all three grades between 1994 and 1998. Because more than a decade has now passed since the media frenzy about crack use peaked in 1986, it is quite possible that "generational forgetting" of the risks of that drug has been occurring. Indeed, perceived risk of crack use had been eroding steadily at all grade levels since 1991 (or 1992 in the case of the twelfth graders) through 2000; however, in 2001 the decline halted in all three grades.

- ***Cocaine***[9] in general began to decline a year earlier than crack, probably because crack was still in the process of diffusing to new parts of the country since it was still quite new. Between 1986 and 1987 the annual prevalence rate for cocaine dropped dramatically, by roughly one-fifth in all three populations then being studied—seniors, college students, and young adults. The decline occurred when young people began to view experimental and occasional use—the type of use in which they are most likely to engage—as more dangerous. This change first began to occur in 1987, probably partly because the hazards of cocaine use received extensive media coverage during the preceding year, but almost surely in part because of the highly publicized cocaine-related deaths in 1986 of sports stars Len Bias and Don Rogers. By 1992, the annual prevalence of cocaine use had fallen by about two-thirds among the three populations for which long-term data are available (twelfth graders, college students, and young adults).

  During the 1990s, however, cocaine use in all five populations increased some, both beginning and ending in a staggered pattern by age. Use rose among eighth graders from 1991 to 1998, among tenth and twelfth graders from 1992 to 1999, among college students from 1994 to 2000, and among young adults from 1996 through 2001. (Note that a turnaround has yet to occur in the two older groups.)

  Again, the story regarding attitudes and beliefs is informative. Having risen substantially after 1986, the perceived risk of using cocaine actually showed some (nonsignificant) decline in 1992 among seniors. In 1993, perceived risk for ***cocaine other than crack*** fell sharply in all grades and disapproval began to decline in all grades, though not as sharply as perceived risk. The decline in perceived risk had virtually ended by 1995 among eighth graders, by 1998 among tenth graders, and by 2000 among twelfth graders. Disapproval declined between 1991 and 1996 among eighth graders, before leveling, and in 1992 through 1998 among tenth and twelfth graders, with the exception of an increase for twelfth graders in 1995. These changes foretold a subsequent leveling of use at each grade level.

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[9] Unless otherwise specified, all references to "cocaine" refer to the use of cocaine in any form, including crack.

Through 1989, there was no decline in perceived availability of cocaine among twelfth graders; in fact, it rose steadily from 1983 to 1989, suggesting that availability played no role in bringing about the substantial downturn in use after 1986. After 1989, however, perceived availability fell some among seniors; the decline may be explained by the greatly reduced proportions of seniors who said they have any friends who use, because friendship circles are an important part of the supply system. From 1992 through 1998 or 1999, there was rather little change in reports of availability of powder cocaine in the three grades, but in the past couple of years there has been some fall-off.

As with all the illicit drugs, lifetime cocaine prevalence climbs with age, reaching 38% by age 40 (among the 2001 survey respondents). Unlike all of the other illicit drugs, active use of cocaine—i.e., annual prevalence or monthly prevalence—holds fairly steady after high school (and until recent years increased in use after high school) rather than declining. (See Figure 4-5 in Volume II.) Nearly all of the other illicit drugs show a decline in active use with age.

- ***PCP*** use fell sharply among high school seniors between 1979 and 1982, from an annual prevalence of 7.0% to 2.2%. It reached a low point of 1.2% in 1988, rose some in the 1990s to 2.6% in 1996, and declined to 1.8% by 2001. For the young adults, the annual prevalence rate rose very slightly from 0.2% in 1996 to 0.6% in 2001.

- Looking at the long-term trends, we see that the annual prevalence of ***heroin*** use among twelfth graders fell by half between 1975 (1.0%) and 1979 (0.5%). It then stabilized for 15 years, through 1994. Heroin use was also stable in the early 1990s among the other four populations covered here. Then, in 1994 in the case of the eighth graders, and in 1995 in the case of all other groups, there was a sudden uptick in use, with rates jumping in one or two years to two or three times what they had been. The new higher levels of heroin use remained among all five populations for the rest of the decade. In 2000, however, there was a significant decrease in use among eighth graders (from 1.4% in 1999 to 1.1% in 2000) and a significant increase in use among seniors (from 1.1% in 1999 to 1.5% in 2000). The increase among seniors was due entirely to an increase in non-injection use. Use of heroin declined significantly among tenth and twelfth graders in 2001, as did their use of heroin without a needle.

Two factors very likely contributed to the upturn in heroin use in the 1990s. One is a long-term decline in the perceived risk of harm, probably due to "generational forgetting," because it had been a long time since the country had experienced a heroin epidemic. The second factor, not unrelated to the first, is that in recent years the increased purity of heroin has allowed it to be used by means other than injection. This may have lowered an important psychological barrier for some potential users by making heroin use less aversive, and by making it seem less addictive as well as safer, because non-injection reduces the likelihood of transmission of HIV, hepatitis, or other serious diseases. Using some new questions on heroin use introduced in 1995, we were able to show that significant proportions of past-year users in all five populations were indeed taking heroin by means other than injection. (See Table 2-2 and Chapter 4 of Volume I for details.)

The risk perceived to be associated with heroin fell for more than a decade after the study began, with 60% of the 1975 seniors seeing a great risk of trying heroin once or twice and only 46% of the 1986 seniors saying the same. (The decline may be an example of generational forgetting, as the heroin epidemic of the early 1970s faded into the distant past.) Between 1986 and 1991 perceived risk rose some, from 46% to 55%, undoubtedly reflecting the newly recognized threat of HIV infection associated with heroin injection. After 1991, however, perceived risk fell again (to 51% by 1995), this time perhaps reflecting the fact that the newer heroin available on the street could be administered by methods other than injection because it was so much purer. In 1996, perceived risk among seniors began to rise once again, and then rose sharply by 1997 and continued to rise in 1998—perhaps as the result of an anti-heroin campaign launched by the Partnership for a Drug-Free America in June 1996, as well as the visibility of heroin-related deaths of some celebrities in the entertainment and fashion design worlds. The perceived risk of trying heroin began to decrease among seniors in 1999, however, foretelling a significant increase in their use of the drug in 2000. In 2001, as the perceived risk of trying heroin increased slightly, their use finally declined significantly.

Questions about the degree of risk perceived to be associated with heroin use were first introduced into the questionnaires for eighth and tenth graders in 1995. The questions asked specifically and only about use "without using a needle," because we thought this was the form of heroin use of greatest concern at that point. (Similar questions were asked of twelfth graders, as well, in one of the six questionnaire forms.) In general, perceived risk in all three grades rose in 1996 and 1997, before leveling.

- The use of ***narcotics other than heroin*** is reported only for the oldest three populations, because we believe younger students are not accurately discriminating among the drugs that should be included or excluded from this general class. Use had been declining gradually over most of the life of the study in the age groups under study. Seniors had an annual prevalence rate of 6.4% in 1977, which fell to 3.3% by 1992. From about 1992 through 2001, all of the older age groups showed a continuing increase, reaching peak levels of use in 2001, with young adults showing a significant one-year increase this year. (A closer look at the age breakdowns suggests that most of this increase among young adults is concentrated among 19- to 24- year-olds.) The specific drugs in this class are listed in Table E-4 in Appendix E of Volume I, which shows that codeine and opium are among the ones most commonly mentioned by high school seniors in recent years. They also account for much of the increase in the general class, though there have also been increases in the reported use of morphine and Demerol™."

- A long, substantial decline, which began in 1977, occurred for ***tranquilizer*** use among high school seniors. By 1992, annual prevalence reached 2.8%, down from 11% in 1977. Since 1992, use increased significantly (as has been true with most of the drugs), reaching 5.8% in 1999, where it remained in 2000. Reported tranquilizer use also exhibited some modest increase among eighth graders, from 1.8% in 1991 to 3.3% in 1996, before declining a bit to 2.6% in 1998. (Use stood at 3.0% in 2001.) Among tenth graders, annual prevalence remained stable between 1991 and 1994, at around 3.3%, increased significantly to 4.6% by 1996, and to 5.9% by 2001. After a period of stability, college students also showed some increase between 1994 and 2001. For the young adult sample, after a long period of decline, annual prevalence increased significantly in 1998, 2000, and 2001. Most of the reported tranquilizer use in recent years has involved taking Valium™ and Xanax™. (See Table E-3 in Appendix E of Volume I.)

- The long-term gradual decline in ***barbiturate*** use, which began at least as early as 1975, when the study began, halted in 1992. Use among twelfth graders then rose steadily to 6.2% in 2000—only a little more than half of the rate in the peak year of 1975. The 2001 annual prevalence of this class of sedative drugs is lower among young adults (3.7%) and college students (3.8%) than among seniors (5.7%). Use among college students began to rise a couple of years later than it did among twelfth graders, no doubt reflecting the impact of generational replacement. (Data are not included here for eighth and tenth grades, again because we believe the younger students have more problems with the proper classification of the relevant drugs.)

- ***Methaqualone***, another sedative drug, has shown quite a different trend pattern than barbiturates. Its use rose among seniors from 1975 to 1981, when annual prevalence reached 8%. Its use then fell very sharply, declining to 0.2% by 1993, before rising significantly during the general drug resurgence in the 1990s, to 1.1% by 1996, where it leveled until use decreased significantly to 0.3% in 2000; it then leveled in 2001. Use also fell among all young adults and among college students, who had annual prevalence rates of only 0.3% and 0.2%, respectively, by 1989—the last year they were asked about this drug. In the late 1980s, shrinking availability may well have played a role in this drop, as legal manufacture and distribution of the drug ceased. Because of its very low usage rates, only the twelfth-graders are now asked about use of this drug.

- It should be noted that we are seeing in recent years an uninterrupted increase in the use of nearly all of the illicit drugs that are ***central nervous system depressants*** among high school seniors, college students, and young adults generally. These include ***barbiturates***, ***tranquilizers***, and ***narcotics other than heroin***. All of these drugs tended to fall from favor from the mid-1970s through the early 1990s, but many made a comeback in the mid- to late 1990s.

- To summarize, for some years five classes of illicitly used drugs, ***marijuana***, ***amphetamines***, ***cocaine***, ***LSD***, and ***inhalants***, have had an impact on appreciable proportions of young Americans in their late teens and twenties. In 2001, high school seniors showed annual prevalence rates of 37%, 11%, 5%, 7%, and 5%, respectively. Among college students in 2001, the comparable annual prevalence rates are 36%, 7%, 5%, 4%, and 3%; and for all young adults the rates are 29%, 6%, 6%, 3%, and 2%.

- Joining this set of long-established drugs as among the more prevalent is ***MDMA*** (***ecstasy***), which has annual prevalence rates in 2001 of 9% among twelfth graders, 9% among college students, and 8% among young adults. The ***narcotics other than heroin*** are now also reaching appreciable numbers at 7%, 6%, and 5%, respectively, as are ***tranquilizers*** at 7%, 5%, and 6%, respectively.

  In eighth grade, ***inhalants*** are second only to marijuana as the most widely used of the illicitly used drugs. Because of their importance among the younger adolescents, a new index of illicit drug use including inhalants was introduced in Tables 2-1 through 2-2 in recent years. Certainly the use of inhalants reflects a form of illicit, psychoactive drug use; its inclusion makes relatively little difference in the illicit drug index prevalence rates for the older age groups, but considerable difference for the younger ones. For example, in 2001 the proportion of eighth graders reporting any illicit drug use in their lifetime, exclusive of inhalants, was 27%, whereas including inhalants raised the figure to 35%.

- Several additional classes of drugs have been added to the study's coverage in the last year or so, and they are all discussed in Chapter 4 of Volume I. These include ***ketamine, GHB, and Rohypnol,*** so-called "club drugs" (in addition to LSD and ecstasy). In general these drugs have not attained high prevalence rates among eighth, tenth, or twelfth graders: the 2001 annual prevalence rates for ***ketamine*** are 1.3%, 2.1%, and 2.5%, respectively; for ***GHB***, 1.1%, 1.0%, and 1.6%; and for ***Rohypnol***, 0.7%, 1.0%, and 0.9%. There was little change in the use of any of them this year, and for Rohypnol, which has been in the study since 1996, there has been little change since then.

- Two new substances used primarily by males to develop their physique and physical strength were added to the question set in 2001. One is ***androstenedione***, which is a precursor to anabolic steroid and can be purchased over the counter. Among males, where use is heavily concentrated, the annual prevalence rate is quite high, at 1.3%, 3.5%, and 5.3% in grades 8, 10, and 12. (Among females, the rates are 1.0%, 0.9%, and 0.7%.)

- Another physique-enhancing substance that is not a drug, but rather a type of protein supplement, is ***creatine***. Because we thought its use often was combined with the use of steroids and androstenedione, we included a question on its use in 2001 and found prevalence of use to be very high. Among boys, who again are the primary users, annual prevalence for creatine is 5%, 15%, and 22%. (For girls, the rates are 1%, 2%, and 2%.)

- The study has contained a set of questions about the use of non-prescription stimulants for some years, including stay-awake pills, diet pills, and the so-called "look-alikes." The annual prevalence among twelfth graders of over-the-counter ***stay-awake pills***, which usually contain caffeine as their active ingredient, nearly doubled between 1982 and 1990, increasing from 12% to 23%. After 1990 this statistic fell, reaching 15% by 2000, and then increased some in 2001. Earlier decreases also occurred among the college-aged young adult population (ages 19 to 22), in which annual prevalence was 26% in 1989 and declined to 16% in 1999 and 2000—its lowest level since 1986. The rate remains about the same in 2001, at 17%.

  The ***look-alikes*** also have shown some falloff in recent years. Among high school seniors, annual prevalence decreased slightly from 6.8% in 1995 to 5.0% in 1999 but has been increasing since then; among young adults aged 19 to 22, use also declined from 6.0% in 1995 to 3.7% in 2001. Over-the-counter ***diet pills*** have not shown a recent decline. Among high schools seniors, annual prevalence did decline from 1986 to 1995, from 15% to 10%; it stands at 12% in 2001. (Among twelfth-grade girls in 2001, some 24% had tried diet pills by the end of senior year, 16% used them in the past year, and 8% used them in just the past 30 days.) Among young adults aged 19 to 22 there also had been an earlier decline from 1986 to 1995, with annual prevalence moving from 17% to 7%. Use then rose slightly to 9.5% in 2001.

College-Noncollege Differences in Illicit Drug Use

- American college students (defined here as those respondents one to four years past high school who were actively enrolled full-time in a two- or four-year college) show annual usage rates for several categories of drugs that are about average for all high school graduates their age; these categories include ***any illicit drug***, ***marijuana***, ***inhalants***, ***ecstasy*** (***MDMA***), and ***narcotics other than heroin***. For several other categories of drugs, however, college students have rates of use that are below those of their age peers, including ***any illicit drug other than marijuana***, ***hallucinogens***, ***LSD*** specifically, ***cocaine***, ***crack cocaine*** specifically, ***heroin***, ***amphetamines***, ***ice***, ***barbiturates***, and ***tranquilizers***.

- Because college-bound seniors had below-average rates of use on *all* of the illicit drugs while they were in high school, the eventual attainment of parity on many of them reflects some closure of the gap. As results from the study published in a recent book have shown, this college effect of "catching up" is largely explainable in terms of differential rates of leaving the parental home after high school graduation and of getting married. College students are more likely than their age peers to have left the parental home and its constraining influences and less likely to have entered marriage, with its constraining influences.[10]

- In general, the trends since 1980 in illicit substance use among American college students have paralleled those of their age peers not in college. Most drugs showed a period of substantial decline in use sometime after 1980. Further, all young adult high school graduates through age 28, as well as college students taken separately, showed trends highly parallel for the most part to the trends among high school seniors until about 1992. After 1992, a number of drugs showed an increase in use among seniors (as well as eighth and tenth graders), but not among college students and young adults.

  This divergence, combined with the fact that the upturn began first among the eighth graders (in 1992), suggests that cohort effects were emerging for illicit drug use, as we have discussed above. In fact, as those heavier-using cohorts of high school seniors entered the college years, we saw a lagged increase in the use of several drugs in college. For example, annual prevalence reached a low point among twelfth graders in 1992 for a number of drugs (e.g., ***cocaine***, ***amphetamines***, ***barbiturates***, ***tranquilizers***, ***other narcotics***, and ***any illicit drug other than marijuana***) before rising thereafter; among college students, those same drugs reached a low two years later in 1994, and then began to rise gradually. Then, in 1998, as ***marijuana*** use was declining in the three grades of secondary school, we saw a sharp increase among college students. The evidence for cohort effects resulting from generational replacement is impressive and consistent with our earlier predictions.

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[10] Bachman, J. G., Wadsworth, K. N., O'Malley, P. M., Johnston, L. D., & Schulenberg, J. (1997). *Smoking, drinking, and drug use in young adulthood: The impacts of new freedoms and new responsibilities.* Mahwah, NJ: Lawrence Erlbaum Associates.

Male-Female Differences in Illicit Drug Use

- Regarding gender differences in three older populations (high school seniors, college students, and young adults), males are more likely to use *most illicit drugs*, and the differences tend to be largest at the higher frequency levels. ***Daily marijuana use*** among high school seniors in 2001, for example, is reported by 7.9% of males versus 3.6% of females; among all adults (aged 19 to 32 years) by 5.7% of males versus 3.4% of females; and among college students, specifically, by 5.7% of males versus 3.8% of females.

- In the eighth- and tenth-grade samples there are fewer and smaller gender differences in the use of drugs—perhaps because girls tend to date and then emulate older boys, who are in age groups considerably more likely to use drugs. While the rate of using ***marijuana*** in the past year is slightly higher for boys, the rate for the use of ***any illicit drug other than marijuana*** is slightly higher for girls. There is little male-female difference in eighth and tenth grades in the use of ***cocaine***, ***crack***, and ***heroin***. ***Amphetamine*** use and ***tranquilizer*** use are both slightly higher among females.

TRENDS IN ALCOHOL USE

- Several findings about ***alcohol*** use in these age groups are noteworthy. First, despite the fact that it is illegal for virtually all secondary school students and most college students to purchase alcoholic beverages, experience with alcohol is almost universal among them. That is, alcohol has been tried by 51% of eighth graders, 70% of tenth graders, 80% of twelfth graders, and 86% of college students; and active use is widespread. Most important, perhaps, is the widespread occurrence of ***occasions of heavy drinking***—measured by the percent reporting five or more drinks in a row at least once in the prior two-week period. Among eighth graders this statistic stands at 13%, among tenth graders at 25%, among twelfth graders at 30%, and among college students at 41%. After the early twenties this behavior recedes somewhat with age, reflected by the 36% rate found in the entire young adult sample and the 24% rate found among 31- to 32-year-olds.

- Alcohol use did not increase as use of other illicit drugs decreased among seniors from the late 1970s to the early 1990s, although it was common to hear such a "displacement hypothesis" asserted. This study demonstrates that the opposite seems to be true. After 1980, when illicit drug use was declining, the monthly prevalence of alcohol use among seniors also declined gradually, but substantially, from 72% in 1980 to 51% in 1993. ***Daily alcohol use*** declined from a peak of 6.9% in 1979 to 2.5% in 1993; and the prevalence of drinking ***five or more drinks in a row*** during the prior two-week interval fell from 41% in 1983 to 28% in 1993—nearly a one-third decline. When illicit drug use rose again in the 1990s, there was evidence that alcohol use (particularly binge drinking) was rising some as well—albeit not nearly as sharply as did marijuana use. In the late 1990s, as illicit drug use leveled in secondary schools and began a gradual decline, similar trends are observed for alcohol.

Male-Female Differences in Alcohol Use

- There is a substantial gender difference among high school seniors in the prevalence of ***occasions of heavy drinking*** (24% for females versus 36% for males in 2001); this difference generally had been diminishing very gradually since the study began. (In 1975 there was a 23-percentage-point difference between them, versus a 12-point difference in 2001.)

- As just discussed, there also are substantial gender differences in alcohol use among college students, and young adults generally, with males drinking more. For example, 48% of college males report having ***five or more drinks in a row*** over the previous two weeks versus 36% of college females. There has not been a great deal of change in this gender difference since 1980.

College-Noncollege Differences in Alcohol Use

- The data from college students show a quite different pattern of change in relation to alcohol use than that of twelfth graders or noncollege respondents of the same age. (See Figure 9-14 in Volume II.) From 1980 to 1993, college students showed considerably less drop-off in monthly prevalence of ***alcohol*** use (82% to 70%) than did high school seniors (72% to 51%) and slightly less decline in daily prevalence (6.5% to 3.9%) compared to a decline from 6.0% to 2.5% among high school seniors. ***Occasions of heavy drinking*** also declined less among college students from 1980 to 1993, from 44% to 40%, compared to a decline from 41% to 28% among high school seniors. Among noncollege age-mates, the decline was from 41% to 34%. Thus, because both their noncollege age-mates and high school students were showing greater declines, the college students stood out as having maintained a high rate of binge or party drinking. Since 1993, the college students changed little (41% in 2001—similar to the 40% rate observed in 1993), while their noncollege age-mates increased by 3 percentage points, to 37%; high school seniors increased by 2 percentage points, to 30%. Still, college students stand out as having a relatively high rate of binge or party drinking.

  Because the college-bound seniors in high school are consistently less likely to report occasions of heavy drinking than the noncollege-bound, the higher rates of such drinking in college indicate that they "catch up to and pass" their peers in binge drinking after high school graduation.

- Since 1980, college students have generally had ***daily drinking*** rates that were slightly lower than their age peers, suggesting that they were more likely to confine their drinking to weekends, when they tend to drink a lot. College men have much higher rates of daily drinking than college women (7.2% versus 2.9% in 2001). This gender difference is even greater in the noncollege group (8.0% versus 3.1%, respectively).

- The rate of daily drinking fell considerably among the noncollege group, from 8.3% in 1980 to 3.2% in 1994, but by 2000 had risen to 5.8%. Daily drinking by the college group moved from 6.5% to 3.0% in 1995, and stands at 4.7% in 2001.

- Comparisons between the college and noncollege group in terms of binge drinking have typically shown that college students are more likely to engage in this activity. In 2001, it appears that this difference is largely due to females. Females in college have a considerably higher rate (36%) than females in their age group who do not attend college (28%); males in both the college and noncollege settings have similar rates (48% and 49%, respectively.)

TRENDS IN CIGARETTE SMOKING

- Quite a number of very important findings about ***cigarette smoking*** among American adolescents and young adults have emerged during the life of the study. Despite the demonstrated health risks associated with smoking, sizeable and, during the first half of the 1990s, growing proportions of young people continued to establish regular cigarette habits during late adolescence. In fact, since the study began in 1975, cigarettes have consistently comprised the class of abusable substance most frequently used on a daily basis by high school students.

- During most of the 1980s, when smoking rates were falling steadily among adults, we reported that smoking among adolescents was not declining. Then the situation went from bad to worse.

- Among eighth and tenth graders, the current smoking rate increased by about half between 1991 (when their use was first measured) and 1996; and among twelfth graders, the current smoking rate rose by nearly one-third between 1992 (their recent low point) and 1997. This study played an important role in bringing these disturbing increases in adolescent smoking to public attention during those years.

  Fortunately, there have been some important declines in current smoking since 1996 in the case of eighth and tenth graders and since 1997 in the case of twelfth graders. In 2001, 12% of eighth graders, 21% of tenth graders, and 30% of twelfth graders reported smoking one or more cigarettes in the prior 30 days. Thus, despite the recent improvements, at present nearly a third of American young people are current smokers by the time they complete high school; and other research consistently shows that smoking rates are substantially higher among those who drop out before graduating.

Daily smoking rates also increased by about half among eighth graders (from a low of 7.0% in 1992 to 10.4% in 1996) and tenth graders (from a low of 12.3% in 1992 to 18.3% in 1996), while daily smoking among twelfth graders increased by 43% (from a low of 17.2% in 1992 to 24.6% in 1997). In 1997, we saw the first evidence of a change in the situation, as daily smoking rates declined among eighth graders and leveled among tenth graders. There was a significant decline in tenth and twelfth graders' daily smoking rates by 1998. All three grades have been continuing to decline in use through 2001, including significant declines among eighth and tenth graders. Among college students there was a nearly 50% increase in smoking from 1994 (13%) through 1999 (19%)—reflecting the cohort replacement effect of the heavier smoking senior classes—before a turnaround began in 2000 with a significant decline in 2001 (15%). For high school seniors, during a much earlier period (from 1977 to 1981), there had been a substantial decline in daily smoking, a leveling for nearly a decade (through 1990), and a slight decline in 1991 and 1992. Rates then started up, and the 1998 decline in daily smoking rates was the first decline in use by seniors since 1992. Use rose slightly in 1999, then dropped in 2000 and 2001.

The dangers perceived to be associated with ***pack-a-day*** smoking differ greatly by grade level and seem to be unrealistically low at all grade levels. Currently, nearly three-quarters of the seniors (73%) report that pack-a-day smokers run a great risk of harming themselves physically or in other ways: more importantly, only 57% of the eighth graders say the same. All three grades showed a decrease in perceived risk between 1993 and 1995, as use was rising rapidly, but a slightly larger and offsetting increase between 1995 and 2000, presaging the subsequent downturn in smoking.

Disapproval of cigarette smoking had been in decline longer: from 1991 through 1996 among eighth and tenth graders, and from 1992 to 1996 among twelfth graders. Since then there has been an increase in disapproval in all three grades, though it is not yet large enough to offset the earlier decline completely. Undoubtedly the heavy media coverage of the tobacco issue (the proposed settlement with the state attorneys general, the congressional debate, the eventual state settlements, etc.) had an important influence on these attitudes and beliefs. However, that coverage diminished considerably in 1998, raising the question of whether these changes in youth attitudes would continue. It may well be, of course, that the removal of certain kinds of cigarette advertising and promotion, combined with national and state-level anti-smoking campaigns and recent increases in cigarette prices, have served to sustain these changes.

Age and Cohort-Related Differences in Cigarette Smoking

- Initiation of smoking most often occurs in grades six through nine (i.e., at modal ages 11-12 to 14-15), with rather little further initiation after high school, although a number of light smokers make the transition to heavy smoking in the first two years after high school. Analyses presented in this volume and elsewhere have shown that cigarette smoking evidences a clear "cohort effect." That is, if a class (or birth) cohort establishes an unusually high rate of smoking at an early age relative to other cohorts, the rate is likely to remain high throughout the life cycle relative to that of other birth cohorts at equivalent ages.

- As we reported in the "Other Findings from the Study" chapter in the 1986 volume in this series, some 53% of the half-pack-a-day (or more) smokers in senior year said that they had tried to quit smoking and found they could not. Of those who had been daily smokers in twelfth grade, nearly three-quarters were daily smokers seven to nine years later (based on the 1985 follow-up survey), despite the fact that in high school only 5% of them thought they would "definitely" be smoking five years hence. A more recent analysis, based on the 1995 follow-up survey, showed similar results. Nearly two-thirds (63%) of those who had been daily smokers in the twelfth grade were still daily smokers seven to nine years later, although in high school only 3% of them had thought they would "definitely" be smoking five years hence. Clearly, the smoking habit is established at an early age, it is difficult to break for those young people who have it, and young people greatly overrate their own ability to quit. Additional data from the eighth and tenth grade students show us that younger children are even more likely than older ones to underestimate seriously the dangers of smoking.

- The surveys of eighth and tenth graders also show that cigarettes are almost universally available to teens. About two-thirds (68%) of eighth graders and nearly nine-tenths (86%) of tenth graders say that cigarettes are "fairly easy" or "very easy" for them to get, if they want them. Until 1997 there had been little change in reported availability since these questions were first asked in 1992. Over the last five years, however, perceived availability of cigarettes decreased significantly for eighth and tenth graders, quite likely reflecting the impact of new regulations and related enforcement efforts aimed at reducing the sale of cigarettes to children.

College-Noncollege Differences in Cigarette Smoking

- A striking difference in smoking rates has long existed between college-bound and noncollege-bound high school seniors. For example, in 2001 smoking a half-pack or more per day is nearly 2½ times as prevalent among the noncollege-bound seniors (19% versus 8%). Among respondents of college age (one to four years past high school), those not in college show the same dramatically higher rate of smoking than those who are in college, with half-pack-a-day smoking standing at 25% and 8%, respectively. Clearly the differences precede college attendance.

- In the first half of the 1990s, smoking rose some among college students and their same-age peers, although the increases were not as steep for either group as they were among high school seniors. But in 1998 and 1999, while smoking was declining among secondary school students at all grades, smoking increased significantly for college students, no doubt reflecting the cohort effect from earlier, heavier-smoking classes of high school seniors moving into the older age groups. Between 1991 and 1999, the 30-day prevalence of cigarette smoking by college students rose from 23% to 31%, or by about one-third, and daily smoking rose from 14% to 19%—or by about 40%. The year 2000 showed, for the first time in several years, a decline in college student smoking, with this decline continuing in 2001.

Male-Female Differences in Cigarette Smoking

- In the 1970s, high school senior females caught up to, and passed, senior males in their rates of ***current smoking***. Both genders then showed a decline in use followed by a long, fairly level period, with use by females consistently higher, but with the gender difference diminishing. In the early 1990s there was another crossover—rates rose among males and declined among females. Both genders showed increasing use between 1992 and 1997 and then a decline in use since.

  Among college students, females had slightly higher probabilities of being daily smokers from 1980 through 1994—although this long-standing gender difference was not true among their age peers not in college. However, there was a crossover from 1995 through 2000—no doubt an echo of the crossover among seniors in 1991—and beginning in 2001, there is another crossover with smoking rates among college females slightly higher than among males.

RACIAL/ETHNIC COMPARISONS

The three largest ethnic groupings—Whites, African Americans, and Hispanics taken as a group—are examined here, for eighth, tenth, and twelfth graders. (Sample size limitations simply do not allow finer subgroup breakdowns unless many years are combined.) A number of interesting findings emerge in these comparisons, and the reader is referred to Chapters 4 and 5 of Volume I for a full discussion of them.[11]

- African American seniors have consistently shown lower usage rates on most drugs, licit and illicit, than White seniors; this also is true at the lower grade levels where little dropping out of school has yet occurred. The differences are quite large for some drugs, including ***inhalants***, ***LSD***, and ***crack cocaine***, at all three grade levels.

- African American students have a much lower prevalence of 30-day prevalence of ***cigarette smoking*** than White students (13% versus 35% in senior year, in 2001) because their smoking rate continued to decline after 1983, while the rate for White students stabilized for some years. (Smoking rates had been rising among White seniors and African American seniors after 1992, but by 1998 there was a leveling, and since then a reversal, in both groups in all grades.) The White eighth and tenth graders' cigarette use declined significantly in 2001. The only ethnic group not to show a decline in 2001 was the tenth grade African Americans.

- In twelfth grade, ***occasions of heavy drinking*** are much less likely to be reported by African American students (12%) than by White students (35%) or Hispanic students (28%).

- In twelfth grade, of the three racial/ethnic groups, Whites tend to have the highest rates of use on a number of drugs, including ***inhalants***, ***hallucinogens***, ***LSD*** specifically, ***amphetamines***, ***barbiturates***, ***tranquilizers***, ***narcotics other than heroin***, ***alcohol***, ***cigarettes***, and ***smokeless tobacco***.

- However, Hispanics have the highest usage rate in senior year for a number of the most dangerous drugs, for example, ***heroin***, ***cocaine***, and ***crack***. Further, in eighth grade, Hispanics have the highest rates not only on these drugs, but on many of the others, as well. For example, in eighth grade, the annual prevalence of ***marijuana*** for Hispanics is 20%, versus 15% for Whites and African Americans; for ***binge drinking***, 18% for Hispanics, 14% for Whites, and 9% for African Americans. In other words, Hispanics have the highest rates of use for many drugs in eighth grade, but not in twelfth, which suggests that their considerably higher dropout rate (compared to Whites and African Americans) may change their relative ranking by twelfth grade.

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[11] Periodically we publish comparisons that contain a number of the smaller racial/ethnic groups in the population, based on data combined for a number of contiguous years in order to attain adequate sample sizes. The most recent is Bachman, J. G., Wallace, J. M. Jr., O'Malley, P. M., Johnston, L. D., Kurth, C. L., & Neighbors, H. W. (1991). Racial/ethnic differences in smoking, drinking, and illicit drug use among American high school seniors, 1976-1989. *American Journal of Public Health, 81*, 372-377. A sequel article is in press as of this writing: Wallace, J. M., Jr., Bachman J. G., O'Malley, P. M., Johnston, L. D., Schulenberg, J. S., & Cooper, S. M. (in press). Smoking, drinking and drugs: Racial/ethnic differences among American high school seniors, 1976-2000. *Public Health Reports*.

- With regard to trends, seniors in all three racial/ethnic groups exhibited the decline in ***cocaine*** use from 1986 through 1992, although the decline was less steep among African American seniors because their earlier increase in use was not as large as the increase among White and Hispanic students.

- For virtually ***all of the illicit drugs***, the three groups have tended to trend in parallel. Because White seniors had achieved the highest level of use on a number of drugs—including ***amphetamines***, ***barbiturates***, and ***tranquilizers***—they also had the largest declines; African Americans have had the lowest rates and, therefore, the smallest declines.

- The important racial/ethnic differences in ***cigarette smoking*** noted earlier among high school seniors have emerged during the life of the study. The three groups were fairly similar in their smoking rates during the mid-1970s, and all three mirrored the general decline in smoking from 1977 through 1981. From 1981 through 1992, however, smoking rates declined very little, if at all, for Whites and Hispanics, but the rates for African Americans continued to decline steadily. As a result, by 1992 the daily smoking rate for African Americans was one-fifth that for Whites. Subsequently, all three ethnic groups of twelfth graders exhibited fairly parallel trends in smoking.

DRUG USE IN EIGHTH GRADE

It may be useful to focus specifically on the youngest age group in the study—the eighth graders, most of whom are 13 or 14 years old—because the exceptional levels of both licit and illicit drug use that they already have attained help illustrate the nation's urgent need to continue to address the substance abuse problems among its young.

- By eighth grade 51% of youngsters report having tried ***alcohol*** (more than just a few sips), and nearly a quarter (23%) say they have already been ***drunk*** at least once.

- More than a third of the eighth graders (37%) have tried ***cigarettes***, and one in eight (12%) say they have smoked in the prior month. Shocking to most adults is the fact that only 57% of eighth graders recognize that there is great risk associated with being a pack-a-day smoker. While an increasing proportion will recognize the risk by twelfth grade, to a considerable degree the horse is already out of the barn by that time, because many will have become smokers.

- ***Smokeless tobacco*** has been tried by 19% of male eighth graders, is used currently by 7% of them, and is used daily by 2.5%. (Rates are much lower among females than among males.)

- Among eighth graders, 1 in 6 (17%) have used ***inhalants***, and 1 in 25 (4%) say they have used them in the past month. This is the only class of drugs for which use is substantially higher in eighth grade than in tenth or twelfth grade.
- ***Marijuana*** has been tried by 1 in every 5 eighth graders (20%) and has been used in the prior month by almost 1 in every 11 (9%).
- A surprisingly large number of eighth-grade students (10%) say they have tried prescription-type ***amphetamines***; 3.2% say they have used them in the prior 30 days.
- Relatively few eighth graders say they have tried most of the ***other illicit drugs*** yet. (This is consistent with the retrospective reports from seniors concerning the grades in which they first used the various drugs.) But the proportions having at least some experience with them is not inconsequential because a 3.3% prevalence rate, for example, on average represents one child in every 30-student classroom. The 2001 eighth-grade proportions reporting experience with the other illicit drugs are ***ecstasy*** (5.2%), ***tranquilizers*** (4.7%), ***LSD*** (3.4%), ***cocaine other than crack*** (3.3%), ***crack*** (3.0%), ***steroids*** (2.8% overall, and 3.8% among males), ***hallucinogens other than LSD*** (1.8%), ***heroin*** (1.7%).
- In total, 15% of all eighth graders in 2001—one in every seven—have tried ***some illicit drug other than marijuana*** (excluding inhalants).
- The very large number of students who have already begun use of the so-called "gateway drugs" (***tobacco***, ***alcohol***, ***inhalants***, and ***marijuana***) suggests that a substantial number of eighth-grade students are already at risk of proceeding further to such drugs as LSD, cocaine, amphetamines, and heroin.

DRUG USE BY AGE 40

Because we have now followed up graduating high school seniors into their forties, we can characterize the drug-using history of today's 40-year-olds. This is important not only because it characterizes how use by these respondents has developed over more than two decades since they left high school, but also because many of them are now themselves the parents of adolescents. Their active use of substances may serve as role-modeling for their children, and their own past experience may complicate their communications with their children regarding drugs. The level of use they have attained is truly impressive. (See Chapter 4 of Volume II for greater detail and discussion.)

- Among 40-year-old high school graduates in 2001, we estimate that nearly four out of five (78%) have tried ***marijuana*** and that over two-thirds (70%) have tried an ***illicit drug other than marijuana*** (estimates adjusted as described in Volume II).

  Their current behavior is far less extreme than those statistics would imply, however. "Only" 1 in 7 (13%) indicates using marijuana in the last 12 months, while 1 in 14 (7%) affirm use of any other illicit drug in that time period. (Their past-month prevalence rates are lower still—8% and 4%, respectively.) At least 1 in 55 40-year-olds (1.8%) is a ***current daily marijuana*** user, though a great many more have been so at some time in the past.

- Quite high proportions have had some experience during their lifetime with several of the specific illicit drugs other than marijuana. These include ***amphetamines*** (52%), ***cocaine*** in any form (44%), ***non-crack forms of cocaine*** (37%), ***tranquilizers*** (37%), ***hallucinogens*** of any type (30%), ***narcotics other than heroin*** (26%), ***barbiturates*** (25%), ***LSD*** (20%), and ***other hallucinogens*** (21%).

- Among the illicit drugs other than marijuana that have been used in just the past year by this age group (outside of medical regimen) are ***cocaine*** (3% annual prevalence), ***tranquilizers*** (4%), ***barbiturates*** (1%), ***narcotics other than heroin*** (2%), ***amphetamines*** (1%), and **ecstasy** (1%). There is virtually no active use being reported by our respondents at this age of ***LSD***, ***other hallucinogens***, ***inhalants***, ***crack,*** or ***heroin***. (Of course, we would not expect *heavy* heroin or crack users to have remained in the panel studies.)

- ***Alcohol*** consumption is relatively high at this age, with 66% indicating that they consumed at least one alcoholic drink in the prior 30 days, 8% indicating current ***daily drinking*** (defined as drinking on 20 or more occasions in the prior 30 days), and 26% indicating ***occasional heavy drinking*** (defined as five or more drinks on at least one occasion in the prior two weeks).

- Nearly one in four (23%) 40-year-old high school graduates currently smokes ***cigarettes***. Nearly all of those (one in five, or 20%) currently ***smoke daily***.

SUMMARY AND CONCLUSIONS

We can summarize the findings on trends as follows: over more than a decade—from the late 1970s to the early 1990s—there were very appreciable declines in use of a number of ***illicit drugs*** among twelfth-grade students and even larger declines in their use among American college students and young adults. These substantial improvements—which seem largely explainable in terms of changes in attitudes about drug use, beliefs about the risks of drug use, and peer norms against drug use—have some extremely important policy implications. One is that these various substance-using behaviors among American young people are malleable—they *can* be changed. It has been done before. The second is that demand-side factors appear to have been pivotal in bringing about those changes. The reported levels of availability of marijuana, as reported by high school seniors, has held fairly steady throughout the life of the study. (Moreover, both abstainers and quitters rank availability and price very low on their list of reasons for not using.) And, in fact, the perceived availability of cocaine actually was rising during the beginning of the sharp decline in cocaine and crack use, which occurred when the risks associated with that drug suddenly rose sharply.

However, improvements surely are not inevitable; and, when they occur, they should not be taken for granted. Relapse is always possible and, indeed, just such a "relapse" in the longer-term epidemic occurred during the early to mid-1990s, as the country let down its guard on many fronts. (See Chapter 8 for a more detailed discussion of this point.)

In 1992, eighth graders exhibited a significant increase in annual use of ***marijuana***, ***cocaine***, ***LSD***, and ***hallucinogens other than LSD***, as well as an increase in ***inhalant*** use. (In fact, all five populations showed some increase in ***LSD*** use, continuing a longer-term trend for college students and young adults.) Further, the attitudes and beliefs of seniors regarding drug use began to soften.

In 1993, use of a number of drugs began to rise among tenth and twelfth graders, as well, fulfilling our earlier predictions that we had made based on their eroding beliefs about the dangers of drugs and their attitudes about drug use. Increases occurred in a number of the so-called "gateway drugs"—***marijuana***, ***cigarettes***, and ***inhalants***—increases that we argued boded ill for the use of later drugs in the usual sequence of drug-use involvement. Indeed, the proportion of students reporting the use of ***any illicit drug other than marijuana*** rose steadily after 1991 among eighth and tenth graders and after 1992 among twelfth graders. (This proportion increased by more than half among eighth graders, with annual prevalence rising from 8.4% in 1991 to 13.1% in 1996.) The softening attitudes about ***crack*** and other forms of ***cocaine*** also provided a basis for concern—the use of both increased fairly steadily through 1998.

Over the years, this study has demonstrated that changes in perceived risk and disapproval have been important causes of change in the use of several drugs. These beliefs and attitudes surely are influenced by the amount and nature of public attention paid to the drug issue in the historical period during which young people are growing up. A substantial decline in attention to this issue in the early 1990s very likely helps to explain why the increases in perceived risk and disapproval among students ceased and began to backslide. News coverage of the drug issue plummeted between 1989 and 1993 (although it made a considerable comeback as surveys—including this one—began to document that the problem was worsening again), and the media's *pro bono* placement of ads from the Partnership for a Drug-Free America also fell considerably. (The twelfth graders in this study showed a steady decline in their recalled exposure to such ads and in the judged impact of such ads on their own drug-taking behavior.)

Also, the deterioration in the drug abuse situation first began among our youngest cohorts—perhaps because they had not had the same opportunities for vicarious learning from the adverse drug experiences of people around them and people they learn about through the media. Clearly there was a danger that, as the drug epidemic subsided in the 1980s and early 1990s, newer cohorts would have far less opportunity to learn through informal means about the dangers of drugs—that what we have called a "generational forgetting" of those risks would occur through a process of generational replacement of older, more drug-savvy cohorts with newer, more naive ones. If true, this suggests that as drug use subsides, as it did by the early 1990s, the nation must redouble its efforts to ensure that such naive cohorts learn these lessons about the dangers of drugs through more formal means—from schools, parents, and focused messages in the media, for example—and that this more formalized prevention effort be *institutionalized* so that it will endure for the long term. Clearly, for the foreseeable future, American young people will be aware of the psychoactive potential of a host of drugs and will continue to have access to them. That means that each new generation of young people must learn the reasons that they should *not* use drugs. Otherwise their natural curiosity and desires for new experiences will lead a great many of them to use drugs.

The following facts help to put into perspective the magnitude and variety of substance use problems that presently remain among American young people:

- By the end of eighth grade, nearly four in every ten (35%) American eighth-grade students have tried an ***illicit drug*** (if inhalants are included as an illicit drug), and by twelfth grade, more than half (56%) have done so.

- By their late twenties, over three-fifths (61%) of today's American young adults have tried an ***illicit drug***, and 33% have tried some ***illicit drug other than marijuana*** (usually in addition to marijuana). (These figures do not include inhalants.)

- Today more than one in seven young Americans (15% in 2001) has tried ***cocaine*** by the age of 30, and 8% have tried it by their senior year of high school (i.e., by age 17 or 18). More than one in every twenty-five seniors (3.7%) has tried ***crack***. In the young adult sample, 3.9% have tried crack by age 29-30.

- Over 1 in every 16 high school seniors (5.8%) in 2001 currently smokes ***marijuana daily***. Among young adults aged 19 to 28, the percentage is slightly less (5.0%). Among those same seniors in 2001, 1 in every 5 or 6 (18%) had been daily marijuana smokers at some time for at least a month, and among young adults the comparable figure is one in seven (14.5%).

- Nearly a third of all high school seniors (30%) had consumed ***five or more drinks in a row*** at least once in the two weeks prior to the survey, and such behavior tends to increase among young adults one to four years past high school. The prevalence of such behavior among male college students reaches 48%.

- Nearly one-third (30%) of high school seniors in 2001 were current ***cigarette*** smokers, and 19% already were current daily smokers. In addition, we know from studying previous cohorts that many young adults increase their rates of smoking within a year or so after they leave high school.

- Despite the substantial improvement in this country's drug situation between the late 1970s and the early 1990s, it is still true that this nation's secondary school students and young adults show a level of involvement with illicit drugs that is as great as has been documented in any other industrialized nation in the world.[12] Even by longer-term historical standards in this country, these rates remain extremely high, though in general they are not as high as in the peak years of the epidemic in the late 1970s. Heavy drinking also remains widespread and troublesome; and certainly the continuing initiation of a large, though declining, proportion of young people to cigarette smoking remains a matter of the greatest public health concern.

- Finally, we note the seemingly unending capacity of pharmacological experts and amateurs to discover new substances with abuse potential that can be used to alter mood and consciousness. There is also a great capacity for our young people to discover the abuse potential of existing products, such as Robitussin™, and to "rediscover" older drugs, such as ***LSD*** and ***heroin***. While as a society we have made significant progress on a number of fronts in the fight against drug abuse, we must remain vigilant against the opening of new fronts, as well as the reemergence of trouble on older ones.

- In fact, one of the dynamics that keeps the drug epidemic rolling is the emergence of new drugs, whose hazards are little known. In 1999 we saw this happen with the drug ***ecstasy*** (***MDMA***), the use of which continues to grow. Other drugs like ***Rohypnol***, ***ketamine***, and ***GHB*** have appeared recently and now must be added to the list of drugs under study. The spread of such new drugs appears to be facilitated and hastened today by young people's widespread use of chat rooms and other sites on the Internet. We predict a continuous flow of such new substances onto the scene and believe that the task of rapidly documenting their emergence, establishing their adverse consequences, and quickly demystifying them will remain important means by which policymakers, researchers, and educators deal with the continuing threats posed by such drugs.

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[12] A recently published report from an international collaborative study, modeled largely after Monitoring the Future, suggests that in 2000 none of the 30 European countries in which national school surveys of 15- to 16-year-olds were conducted had rates of illicit drug use comparable to those observed in the United States. (Heroin was the one important exception.) See Hibell, B., Anderson, B., Ahlström, S., Balakireva, O., Bjarnasson, T., Kokkevi, A., & Morgan, M. (Eds.). (2000). *The 1999 ESPAD report* (The *European School Survey Project on Alcohol and Other Drugs): Alcohol and other drug use among students in 30 European countries.* Stockholm: The Swedish Council for Information on Alcohol and Other Drugs, and the Council of Europe. (See also Chapter 10 for a more detailed description of the results of this study.)

- The drug problem is not an enemy that can be vanquished, as in a war. It is more a recurring and relapsing problem that must be contained to the extent possible on a long-term, ongoing basis. Therefore, it is a problem that requires an ongoing, dynamic response from our society—one that takes into account the continuing generational replacement of our children, the generational forgetting of the dangers of drugs that can occur with that replacement, and the perpetual additional tracking of new abusable substances that will come onto the scene and threaten to lure our young people into involvement with drugs.

TABLE 2-1
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

(Entries are percentages)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Any Illicit Drug[a]												
8th Grade	18.7	20.6	22.5	25.7	28.5	31.2	29.4	29.0	28.3	26.8	26.8	0.0
10th Grade	30.6	29.8	32.8	37.4	40.9	45.4	47.3	44.9	46.2	45.6	45.6	+0.1
12th Grade	44.1	40.7	42.9	45.6	48.4	50.8	54.3	54.1	54.7	54.0	53.9	-0.1
College Students	50.4	48.8	45.9	45.5	45.5	47.4	49.0	52.9	53.2	53.7	53.6	-0.1
Young Adults	62.2	60.2	59.6	57.5	57.4	56.4	56.7	57.0	57.4	58.2	58.1	0.0
Any Illicit Drug Other Than Marijuana[a,b]												
8th Grade	14.3	15.6	16.8	17.5	18.8	19.2	17.7	16.9	16.3	15.8	14.8	-1.0
10th Grade	19.1	19.2	20.9	21.7	24.3	25.5	25.0	23.6	24.0	23.1	23.4	+0.3
12th Grade	26.9	25.1	26.7	27.6	28.1	28.5	30.0	29.4	29.4	29.0	28.5	-0.5
College Students	25.8	26.1	24.3	22.0	24.5	22.7	24.4	24.8	25.5	25.8	26.3	+0.6
Young Adults	37.8	37.0	34.6	33.4	32.8	31.0	30.5	29.9	30.2	31.3	31.6	+0.4
Any Illicit Drug Including Inhalants[a,c]												
8th Grade	28.5	29.6	32.3	35.1	38.1	39.4	38.1	37.8	37.2	35.1	34.5	-0.6
10th Grade	36.1	36.2	38.7	42.7	45.9	49.8	50.9	49.3	49.9	49.3	48.8	-0.5
12th Grade	47.6	44.4	46.6	49.1	51.5	53.5	56.3	56.1	56.3	57.0	56.0	-1.1
College Students	52.0	50.3	49.1	47.0	47.0	49.1	50.7	55.4	54.4	54.6	53.1	-1.5
Young Adults	63.4	61.2	61.2	58.5	59.0	58.2	58.4	58.5	58.5	59.5	59.0	-0.5
Marijuana/Hashish												
8th Grade	10.2	11.2	12.6	16.7	19.9	23.1	22.6	22.2	22.0	20.3	20.4	+0.1
10th Grade	23.4	21.4	24.4	30.4	34.1	39.8	42.3	39.6	40.9	40.3	40.1	-0.2
12th Grade	36.7	32.6	35.3	38.2	41.7	44.9	49.6	49.1	49.7	48.8	49.0	+0.2
College Students	46.3	44.1	42.0	42.2	41.7	45.1	46.1	49.9	50.8	51.2	51.0	-0.1
Young Adults	58.6	56.4	55.9	53.7	53.6	53.4	53.8	54.4	54.6	55.1	55.7	+0.6
Inhalants[c,d]												
8th Grade	17.6	17.4	19.4	19.9	21.6	21.2	21.0	20.5	19.7	17.9	17.1	-0.8
10th Grade	15.7	16.6	17.5	18.0	19.0	19.3	18.3	18.3	17.0	16.6	15.2	-1.4
12th Grade	17.6	16.6	17.4	17.7	17.4	16.6	16.1	15.2	15.4	14.2	13.0	-1.2
College Students	14.4	14.2	14.8	12.0	13.8	11.4	12.4	12.8	12.4	12.9	9.6	-3.3s
Young Adults	13.4	13.5	14.1	13.2	14.5	14.1	14.1	14.2	14.2	14.3	12.8	-1.4
Nitrites[e]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.6	1.5	1.4	1.7	1.5	1.8	2.0	2.7	1.7	0.8	1.9	+1.1s
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.4	1.2	1.3	1.0	—	—	—	—	—	—	—	—

(Table continued on next page)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Hallucinogens[b,d]												
8th Grade	3.2	3.8	3.9	4.3	5.2	5.9	5.4	4.9	4.8	4.6	4.0	-0.7
10th Grade	6.1	6.4	6.8	8.1	9.3	10.5	10.5	9.8	9.7	8.9	7.8	-1.1
12th Grade	9.6	9.2	10.9	11.4	12.7	14.0	15.1	14.1	13.7	13.0	12.8	-0.2
College Students	11.3	12.0	11.8	10.0	13.0	12.6	13.8	15.2	14.8	14.4	14.8	+0.4
Young Adults	15.7	15.7	15.4	15.4	16.1	16.4	16.8	17.4	18.0	18.4	18.3	-0.1
LSD												
8th Grade	2.7	3.2	3.5	3.7	4.4	5.1	4.7	4.1	4.1	3.9	3.4	-0.4
10th Grade	5.6	5.8	6.2	7.2	8.4	9.4	9.5	8.5	8.5	7.6	6.3	-1.2
12th Grade	8.8	8.6	10.3	10.5	11.7	12.6	13.6	12.6	12.2	11.1	10.9	-0.2
College Students	9.6	10.6	10.6	9.2	11.5	10.8	11.7	13.1	12.7	11.8	12.2	+0.4
Young Adults	13.5	13.8	13.6	13.8	14.5	15.0	15.0	15.7	16.2	16.4	16.0	-0.4
Hallucinogens Other Than LSD[b]												
8th Grade	1.4	1.7	1.7	2.2	2.5	3.0	2.6	2.5	2.4	2.3	1.8	-0.5
10th Grade	2.2	2.5	2.8	3.8	3.9	4.7	4.8	5.0	4.7	4.8	4.0	-0.8
12th Grade	3.7	3.3	3.9	4.9	5.4	6.8	7.5	7.1	6.7	6.9	7.0	+0.1
College Students	6.0	5.7	5.4	4.4	6.5	6.5	7.5	8.7	8.8	8.2	10.7	+2.5s
Young Adults	8.4	8.0	7.6	7.4	7.8	7.9	8.5	9.4	9.3	9.9	12.0	+2.1sss
PCP[e]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.9	2.4	2.9	2.8	2.7	4.0	3.9	3.9	3.4	3.4	3.5	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	3.1	2.0	1.9	2.0	2.2	1.9	2.4	2.7	2.3	2.3	3.1	+0.7
MDMA (Ecstasy)[e,f]												
8th Grade	—	—	—	—	—	3.4	3.2	2.7	2.7	4.3	5.2	+1.0
10th Grade	—	—	—	—	—	5.6	5.7	5.1	6.0	7.3	8.0	+0.7
12th Grade	—	—	—	—	—	6.1	6.9	5.8	8.0	11.0	11.7	+0.7
College Students	2.0	2.9	2.3	2.1	3.1	4.3	4.7	6.8	8.4	13.1	14.7	+1.6
Young Adults	3.2	3.9	3.8	3.8	4.5	5.2	5.1	7.2	7.1	11.6	13.0	+1.3

(Table continued on next page)

TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime											'00–'01
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	change
Cocaine												
8th Grade	2.3	2.9	2.9	3.6	4.2	4.5	4.4	4.6	4.7	4.5	4.3	-0.2
10th Grade	4.1	3.3	3.6	4.3	5.0	6.5	7.1	7.2	7.7	6.9	5.7	-1.2s
12th Grade	7.8	6.1	6.1	5.9	6.0	7.1	8.7	9.3	9.8	8.6	8.2	-0.4
College Students	9.4	7.9	6.3	5.0	5.5	5.0	5.6	8.1	8.4	9.1	8.6	-0.5
Young Adults	21.0	19.5	16.9	15.2	13.7	12.9	12.1	12.3	12.8	12.7	13.1	+0.4
Crack												
8th Grade	1.3	1.6	1.7	2.4	2.7	2.9	2.7	3.2	3.1	3.1	3.0	-0.2
10th Grade	1.7	1.5	1.8	2.1	2.8	3.3	3.6	3.9	4.0	3.7	3.1	-0.6s
12th Grade	3.1	2.6	2.6	3.0	3.0	3.3	3.9	4.4	4.6	3.9	3.7	-0.2
College Students	1.5	1.7	1.3	1.0	1.8	1.2	1.4	2.2	2.4	2.5	2.0	-0.5
Young Adults	4.8	5.1	4.3	4.4	3.8	3.9	3.6	3.8	4.3	4.6	4.7	+0.1
Other Cocaine[g]												
8th Grade	2.0	2.4	2.4	3.0	3.4	3.8	3.5	3.7	3.8	3.5	3.3	-0.2
10th Grade	3.8	3.0	3.3	3.8	4.4	5.5	6.1	6.4	6.8	6.0	5.0	-1.1
12th Grade	7.0	5.3	5.4	5.2	5.1	6.4	8.2	8.4	8.8	7.7	7.4	-0.3
College Students	9.0	7.6	6.3	4.6	5.2	4.6	5.0	7.4	7.8	8.1	8.3	+0.2
Young Adults	19.8	18.4	15.1	13.9	12.4	11.9	11.3	11.5	11.8	11.7	12.1	+0.4
Heroin[h]												
8th Grade	1.2	1.4	1.4	2.0	2.3	2.4	2.1	2.3	2.3	1.9	1.7	-0.2
10th Grade	1.2	1.2	1.3	1.5	1.7	2.1	2.1	2.3	2.3	2.2	1.7	-0.6s
12th Grade	0.9	1.2	1.1	1.2	1.6	1.8	2.1	2.0	2.0	2.4	1.8	-0.6s
College Students	0.5	0.5	0.6	0.1	0.6	0.7	0.9	1.7	0.9	1.7	1.2	-0.5
Young Adults	0.9	0.9	0.9	0.8	1.1	1.3	1.3	1.6	1.7	1.8	2.0	+0.1
With a needle[i]												
8th Grade	—	—	—	—	1.5	1.6	1.3	1.4	1.6	1.1	1.2	0.0
10th Grade	—	—	—	—	1.0	1.1	1.1	1.2	1.3	1.0	0.8	-0.2
12th Grade	—	—	—	—	0.7	0.8	0.9	0.8	0.9	0.8	0.7	-0.1
College Students	—	—	—	—	0.4	0.1	0.2	0.5	0.8	0.7	0.2	-0.5
Young Adults	—	—	—	—	0.4	0.4	0.3	0.4	0.6	0.4	0.6	+0.1
Without a needle[i]												
8th Grade	—	—	—	—	1.5	1.6	1.4	1.5	1.4	1.3	1.1	-0.2
10th Grade	—	—	—	—	1.1	1.7	1.7	1.7	1.6	1.7	1.3	-0.4s
12th Grade	—	—	—	—	1.4	1.7	2.1	1.6	1.8	2.4	1.5	-0.9ss
College Students	—	—	—	—	0.5	1.0	1.2	2.1	1.0	2.5	1.3	-1.1
Young Adults	—	—	—	—	0.9	1.3	1.5	1.7	1.9	2.1	2.1	0.0
Other Narcotics[j]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.6	6.1	6.4	6.6	7.2	8.2	9.7	9.8	10.2	10.6	9.9	-0.8
College Students	7.3	7.3	6.2	5.1	7.2	5.7	8.2	8.7	8.7	8.9	11.0	+2.1
Young Adults	9.3	8.9	8.1	8.2	9.0	8.3	9.2	9.1	9.5	10.0	11.5	+1.5ss

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TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Amphetamines[j]												
8th Grade	10.5	10.8	11.8	12.3	13.1	13.5	12.3	11.3	10.7	9.9	10.2	+0.3
10th Grade	13.2	13.1	14.9	15.1	17.4	17.7	17.0	16.0	15.7	15.7	16.0	+0.3
12th Grade	15.4	13.9	15.1	15.7	15.3	15.3	16.5	16.4	16.3	15.6	16.2	+0.6
College Students	13.0	10.5	10.1	9.2	10.7	9.5	10.6	10.6	11.9	12.3	12.4	+0.1
Young Adults	22.4	20.2	18.7	17.1	16.6	15.3	14.6	14.3	14.1	15.0	15.0	-0.1
Methamphetamine[k,l]												
8th Grade	—	—	—	—	—	—	—	—	4.5	4.2	4.4	+0.2
10th Grade	—	—	—	—	—	—	—	—	7.3	6.9	6.4	-0.5
12th Grade	—	—	—	—	—	—	—	—	8.2	7.9	6.9	-0.9
College Students	—	—	—	—	—	—	—	—	7.1	5.1	5.3	+0.2
Young Adults	—	—	—	—	—	—	—	—	8.8	9.3	9.0	-0.3
Ice[j]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.3	2.9	3.1	3.4	3.9	4.4	4.4	5.3	4.8	4.0	4.1	+0.1
College Students	1.3	0.6	1.6	1.3	1.0	0.8	1.6	2.2	2.8	1.3	2.3	+1.0
Young Adults	2.9	2.2	2.7	2.5	2.1	3.1	2.5	3.4	3.3	3.9	4.0	+0.1
Barbiturates[j]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.2	5.5	6.3	7.0	7.4	7.6	8.1	8.7	8.9	9.2	8.7	-0.5
College Students	3.5	3.8	3.5	3.2	4.0	4.6	5.2	5.7	6.7	6.9	6.0	-0.9
Young Adults	8.2	7.4	6.5	6.4	6.7	6.6	6.5	6.9	7.4	8.1	7.8	-0.3
Tranquilizers[h,j]												
8th Grade	3.8	4.1	4.4	4.6	4.5	5.3	4.8	4.6	4.4	4.4	4.7	+0.3
10th Grade	5.8	5.9	5.7	5.4	6.0	7.1	7.3	7.8	7.9	8.0	8.1	+0.1
12th Grade	7.2	6.0	6.4	6.6	7.1	7.2	7.8	8.5	9.3	8.9	9.2	+0.4
College Students	6.8	6.9	6.3	4.4	5.4	5.3	6.9	7.7	8.2	8.8	9.7	+0.9
Young Adults	11.8	11.3	10.5	9.9	9.7	9.3	8.6	9.6	9.6	10.5	11.9	+1.3s
Rohypnol[e,m]												
8th Grade	—	—	—	—	—	1.5	1.1	1.4	1.3	1.0	1.1	+0.1
10th Grade	—	—	—	—	—	1.5	1.7	2.0	1.8	1.3	1.5	+0.2
12th Grade	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	+0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—

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TABLE 2-1 (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Alcohol[n]												
Any use												
8th Grade	70.1	69.3	67.1	—	—	—	—	—	—	—	—	—
			55.7	55.8	54.5	55.3	53.8	52.5	52.1	51.7	50.5	-1.2
10th Grade	83.8	82.3	80.8	—	—	—	—	—	—	—	—	—
			71.6	71.1	70.5	71.8	72.0	69.8	70.6	71.4	70.1	-1.3
12th Grade	88.0	87.5	87.0	—	—	—	—	—	—	—	—	—
			80.0	80.4	80.7	79.2	81.7	81.4	80.0	80.3	79.7	-0.6
College Students	93.6	91.8	89.3	88.2	88.5	88.4	87.3	88.5	88.0	86.6	86.1	-0.5
Young Adults	94.1	93.4	92.1	91.2	91.6	91.2	90.7	90.6	90.2	90.7	89.9	-0.8
Been Drunk[1]												
8th Grade	26.7	26.8	26.4	25.9	25.3	26.8	25.2	24.8	24.8	25.1	23.4	-1.7
10th Grade	50.0	47.7	47.9	47.2	46.9	48.5	49.4	46.7	48.9	49.3	48.2	-1.1
12th Grade	65.4	63.4	62.5	62.9	63.2	61.8	64.2	62.4	62.3	62.3	63.9	+1.6
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes												
Any use												
8th Grade	44.0	45.2	45.3	46.1	46.4	49.2	47.3	45.7	44.1	40.5	36.6	-3.9sss
10th Grade	55.1	53.5	56.3	56.9	57.6	61.2	60.2	57.7	57.6	55.1	52.8	-2.3s
12th Grade	63.1	61.8	61.9	62.0	64.2	63.5	65.4	65.3	64.6	62.5	61.0	-1.5
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco[a,o]												
8th Grade	22.2	20.7	18.7	19.9	20.0	20.4	16.8	15.0	14.4	12.8	11.7	-1.1
10th Grade	28.2	26.6	28.1	29.2	27.6	27.4	26.3	22.7	20.4	19.1	19.5	+0.4
12th Grade	—	32.4	31.0	30.7	30.9	29.8	25.3	26.2	23.4	23.1	19.7	-3.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[1]												
8th Grade	1.9	1.7	1.6	2.0	2.0	1.8	1.8	2.3	2.7	3.0	2.8	-0.2
10th Grade	1.8	1.7	1.7	1.8	2.0	1.8	2.0	2.0	2.7	3.5	3.5	0.0
12th Grade	2.1	2.1	2.0	2.4	2.3	1.9	2.4	2.7	2.9	2.5	3.7	+1.2s
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	1.7	1.9	1.5	1.3	1.5	1.5	1.4	1.4	1.9	1.4	1.4	0.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

Footnotes for Table 2-1 to Table 2-3

Approximate Weighted Ns	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
8th Graders	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200
10th Graders	14,800	14,800	15,300	15,800	17,000	15,600	15,500	15,000	13,600	14,300	14,000
12th Graders	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800
College Students	1,410	1,490	1,490	1,410	1,450	1,450	1,480	1,440	1,440	1,350	1,340
Young Adults	6,600	6,800	6,700	6,500	6,400	6,300	6,400	6,200	6,000	5,700	5,800

[a] For 12th graders, college students, and young adults only: Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of other narcotics and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2000 data presented here are based on all forms. For 8th, 10th, and 12th graders only: The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[c] For 12th graders, college students, and young adults only: Data based on five of six forms in 1991–98; N is five-sixths of N indicated. Data based on three of six forms beginning in 1999; N is three-sixths of N indicated.

[d] Inhalants are unadjusted for underreporting of amyl and butyl nitrites; hallucinogens are unadjusted for underreporting of PCP.

[e] For 12th graders only: Data based on one of six forms; N is one-sixth of N indicated. For college students and young adults only: Data based on two of six forms; N is one-third of N indicated. Questions about nitrite use were dropped from the college student and young adult questionnaires in 1995. Questions about smokeless tobacco use were dropped from the college student and young adult analyses in 1989.

[f] For 8th and 10th graders only: Data based on one of two forms in 1996; N is one-half of N indicated. Beginning in 1997, data based on one-third of N indicated due to changes in the questionnaire forms.

[g] For 12th graders, college students, and young adults only: Data based on four of six forms; N is four-sixths of N indicated for each group.

[h] In 1995, the heroin question was changed in three of six forms for 12th graders and in one of two forms for 8th and 10th graders. Separate questions were asked for use with injection and without injection. In 1996, the heroin question was changed in all remaining 8th and 10th grade forms. Data presented here represent the combined data from all forms.

[i] For 8th and 10th graders only: Data based on one of two forms in 1995; N is one-half of N indicated. Data based on all forms beginning in 1996. For 12th graders only: Data based on three of six forms; N is three-sixths of N indicated.

[j] Only drug use which was not under a doctor's orders is included here.

[k] For 8th and 10th graders only: Data based on one of four forms; N is one-third of N indicated.

[l] For 12th graders, college students, and young adults only: Data based on two of six forms; N is two-sixths of N indicated for each group.

[m] For 8th and 10th graders only: Data based on one of two forms in 1996; N is one-half of N indicated. Data based on three of four forms in 1997–98; N is two-thirds of N indicated. Data based on two of four forms beginning in 1999; N is one-third of N indicated.

[n] For 8th, 10th, and 12th graders only: In 1993, the question text was changed slightly in half of the forms to indicate that a "drink" meant "more than just a few sips." The data in the upper line for alcohol came from forms using the original wording, while the data in the lower line came from forms using the revised wording. In 1993, each line of data was based on one of two forms for the 8th and 10th graders and on three of six forms for the 12th graders. N is one-half of N indicated for these groups. Beginning in 1994, data based on all forms for all grades. For college students and young adults, the revision of the question text resulted in rather little change in the reported prevalence of use. The data for all forms are used to provide the most reliable estimate of change.

[o] For 8th and 10th graders only: Data based on one of two forms for 1991–96 and on two of four forms beginning in 1997; N is one-half of N indicated.

[p] For 12th graders only: Data based on two of six forms in 2000; N is two-sixths of N indicated. Data based on three of six forms beginning in 2001; N is three-sixths of N indicated.

[q] Daily used is defined as use on twenty or more occasions in the past thirty days except for cigarettes and smokeless tobacco, for which actual daily use is measured, and for 5+ drinks, for which the prevalence of having five or more drinks in a row in the last two weeks is measured.

TABLE 2-2
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Any Illicit Drug[a]																								
8th Grade	11.3	12.9	15.1	18.5	21.4	23.6	22.1	21.0	20.5	19.5	19.5	0.0	5.7	6.8	8.4	10.9	12.4	14.6	12.9	12.1	12.2	11.9	11.7	-0.2
10th Grade	21.4	20.4	24.7	30.0	33.3	37.5	38.5	35.0	35.9	36.4	37.2	+0.8	11.6	11.0	14.0	18.5	20.2	23.2	23.0	21.5	22.1	22.5	22.7	+0.2
12th Grade	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	+0.6	16.4	14.4	18.3	21.9	23.8	24.6	26.2	25.6	25.9	24.9	25.7	+0.8
College Students	29.2	30.6	30.6	31.4	33.5	34.2	34.1	37.8	36.9	36.1	37.9	+1.8	15.2	16.1	15.1	16.0	19.1	17.6	19.2	19.7	21.6	21.5	21.9	+0.4
Young Adults	27.0	28.3	28.4	28.4	29.8	29.2	29.2	29.9	30.3	30.8	32.1	+1.3	15.1	14.8	14.9	15.3	15.8	15.8	16.4	16.1	17.1	18.1	18.8	+0.7
Any Illicit Drug Other Than Marijuana[a,b]																								
8th Grade	8.4	9.3	10.4	11.3	12.6	13.1	11.8	11.0	10.5	10.2	9.9	-0.2	3.8	4.7	5.3	5.6	6.5	6.9	6.0	5.5	5.5	5.6	5.5	-0.1
10th Grade	12.2	12.3	13.9	15.2	17.5	18.4	18.2	16.6	16.7	16.7	16.8	+0.1	5.5	5.7	6.5	7.1	8.9	8.9	8.8	8.6	8.6	8.5	8.7	+0.2
12th Grade	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4	19.8	-0.6	7.1	6.3	7.9	8.8	10.0	9.5	10.7	10.7	10.4	10.4	10.8	+0.4
College Students	13.2	13.1	12.5	12.2	15.9	12.8	15.8	14.0	15.4	15.6	16.4	+0.8	4.3	4.6	5.4	4.6	6.3	4.5	6.8	6.1	6.4	6.9	7.5	+0.5
Young Adults	14.3	14.1	13.0	13.0	13.8	13.2	13.6	13.2	13.7	14.9	15.4	+0.5	5.4	5.5	4.9	5.3	5.7	4.7	5.5	5.5	6.0	6.4	7.0	+0.6
Any Illicit Drug Including Inhalants[a,c]																								
8th Grade	16.7	18.2	21.1	24.2	27.1	28.7	27.2	26.2	25.3	24.0	23.9	-0.1	8.8	10.0	12.0	14.3	16.1	17.5	16.0	14.9	15.1	14.4	14.0	-0.4
10th Grade	23.9	23.5	27.4	32.5	35.6	39.6	40.3	37.1	37.7	38.0	38.7	+0.7	13.1	12.6	15.5	20.0	21.6	24.5	24.1	22.5	23.1	23.6	23.6	+0.1
12th Grade	31.2	28.8	32.5	37.6	40.2	41.9	43.3	42.4	42.8	42.5	42.6	+0.1	17.8	15.5	19.3	23.0	24.8	25.5	26.9	26.6	26.4	26.4	26.5	+0.1
College Students	29.8	31.1	31.7	31.9	33.7	35.1	35.5	39.1	37.4	37.0	38.2	+1.2	15.1	16.5	15.7	16.4	19.6	18.0	19.6	21.0	21.8	22.6	21.9	-0.7
Young Adults	27.8	29.2	28.9	29.2	30.4	30.2	30.1	30.6	30.6	31.2	33.2	+2.0	15.4	15.3	15.1	16.1	16.1	16.4	16.9	16.7	17.4	18.8	19.2	+0.4
Marijuana/Hashish																								
8th Grade	6.2	7.2	9.2	13.0	15.8	18.3	17.7	16.9	16.5	15.6	15.4	-0.1	3.2	3.7	5.1	7.8	9.1	11.3	10.2	9.7	9.7	9.1	9.2	+0.1
10th Grade	16.5	15.2	19.2	25.2	28.7	33.6	34.8	31.1	32.1	32.2	32.7	+0.5	8.7	8.1	10.9	15.8	17.2	20.4	20.5	18.7	19.4	19.7	19.8	0.0
12th Grade	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	+0.5	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	+0.8
College Students	26.5	27.7	27.9	29.3	31.2	33.1	31.6	35.9	35.2	34.0	35.6	+1.6	14.1	14.6	14.2	15.1	18.6	17.5	17.7	18.6	20.7	20.0	20.2	+0.1
Young Adults	23.8	25.2	25.1	25.5	26.5	27.0	26.8	27.4	27.6	27.9	29.2	+1.2	13.5	13.3	13.4	14.1	14.0	15.1	15.0	14.9	15.6	16.1	16.7	+0.6
Inhalants[c,d]																								
8th Grade	9.0	9.5	11.0	11.7	12.8	12.2	11.8	11.1	10.3	9.4	9.1	-0.3	4.4	4.7	5.4	5.6	6.1	5.8	5.6	4.8	5.0	4.5	4.0	-0.5
10th Grade	7.1	7.5	8.4	9.1	9.6	9.5	8.7	8.0	7.2	7.3	6.6	-0.7	2.7	2.7	3.3	3.6	3.5	3.3	3.0	2.9	2.6	2.6	2.4	-0.1
12th Grade	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	-1.4s	2.4	2.3	2.5	2.7	3.2	2.5	2.5	2.3	2.0	2.2	1.7	-0.5
College Students	3.5	3.1	3.8	3.0	3.9	3.6	4.1	3.0	3.2	2.9	2.8	-0.2	0.9	1.1	1.3	0.6	1.3	0.8	0.8	0.6	1.5	0.9	0.4	-0.5
Young Adults	2.0	1.9	2.1	2.1	2.4	2.2	2.3	2.1	2.3	2.1	1.7	-0.4	0.5	0.6	0.7	0.5	0.7	[illegible]	0.5	0.7	0.8	0.5	0.4	-0.1
Nitrites[e]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.9	0.5	0.9	1.1	1.1	1.6	1.2	1.4	0.9	0.6	0.6	0.0	0.4	0.3	0.6	0.4	0.4	0.7	0.7	1.0	0.4	0.3	0.5	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.2	0.1	0.4	0.3	—	—	—	—	—	—	—	—	*	0.1	0.2	0.1	—	—	—	—	—	—	—	—

(Table continued on next page)

TABLE 2-2 (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Hallucinogens[b,d]																								
8th Grade	1.9	2.5	2.6	2.7	3.6	4.1	3.7[e]	3.4	2.9	2.8	2.5	-0.4	0.8	1.1	1.2	1.3	1.7	1.9	1.8	1.4	1.3	1.2	1.2	0.0
10th Grade	4.0	4.3	4.7	5.8	7.2	7.8	7.6	6.9	6.9	6.1	5.2	-0.9	1.6	1.8	1.9	2.4	3.3	2.8	3.3	3.2	2.9	2.3	2.1	-0.2
12th Grade	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1	8.4	+0.2	2.2	2.1	2.7	3.1	4.4	3.5	3.9	3.8	3.5	2.6	3.2	+0.6
College Students	6.3	6.8	6.0	6.2	8.2	6.9	7.7	7.2	7.8	6.7	7.5	+0.8	1.2	2.3	2.5	2.1	3.3	1.9	2.1	2.1	2.0	1.4	1.8	+0.4
Young Adults	4.5	5.0	4.5	4.8	5.6	5.6	5.9	5.2	5.4	5.4	5.4	-0.1	1.1	1.5	1.2	1.4	1.7	1.2	1.5	1.4	1.3	1.2	1.2	0.0
LSD																								
8th Grade	1.7	2.1	2.3	2.4	3.2	3.5	3.2	2.8	2.4	2.4	2.2	-0.3	0.6	0.9	1.0	1.1	1.4	1.5	1.5	1.1	1.1	1.0	1.0	0.0
10th Grade	3.7	4.0	4.2	5.2	6.5	6.9	6.7	5.9	6.0	5.1	4.1	-1.0s	1.5	1.6	1.6	2.0	3.0	2.4	2.8	2.7	2.3	1.6	1.5	-0.2
12th Grade	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	0.0	1.9	2.0	2.4	2.6	4.0	2.5	3.1	3.2	2.7	1.6	2.3	+0.7s
College Students	5.1	5.7	5.1	5.2	6.9	5.2	5.0	4.4	5.4	4.3	4.0	-0.3	0.8	1.8	1.6	1.8	2.5	0.9	1.1	1.5	1.2	0.9	1.0	+0.1
Young Adults	3.8	4.3	3.8	4.0	4.6	4.5	4.4	3.5	4.0	3.7	3.4	-0.3	0.8	1.1	0.8	1.1	1.3	0.7	0.9	1.0	0.8	0.8	0.7	0.0
Hallucinogens Other Than LSD[b]																								
8th Grade	0.7	1.1	1.0	1.3	1.7	2.0	1.8	1.6	1.5	1.4	1.1	-0.3	0.3	0.4	0.5	0.7	0.8	0.9	0.7	0.7	0.6	0.6	0.6	0.0
10th Grade	1.3	1.4	1.9	2.4	2.8	3.3	3.3	3.4	3.2	3.1	2.8	-0.4	0.4	0.5	0.7	1.0	1.0	1.0	1.2	1.4	1.2	1.2	1.1	-0.2
12th Grade	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4	4.4	0.0	0.7	0.5	0.8	1.2	1.3	1.6	1.7	1.6	1.6	1.7	1.8	+0.1
College Students	3.1	2.6	2.7	2.8	4.0	4.1	4.9	4.4	4.5	4.4	5.5	+1.1	0.6	0.7	1.1	0.8	1.6	1.2	1.2	0.7	1.2	0.8	0.8	0.0
Young Adults	1.7	1.9	1.9	2.0	2.5	2.8	3.1	3.0	3.0	3.4	3.5	+0.1	0.3	0.5	0.6	0.6	0.6	0.6	0.7	0.5	0.6	0.7	0.6	-0.1
PCP[e]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.4	1.4	1.6	1.8	2.6	2.3	2.1	1.8	2.3	1.8	-0.5	0.5	0.6	1.0	0.7	0.6	1.3	0.7	1.0	0.8	0.9	0.5	-0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.3	0.3	0.2	0.3	0.3	0.2	0.5	0.6	0.6	0.3	0.6	+0.3	0.1	0.2	0.2	0.1	0.0	0.1	0.1	0.2	0.2	0.0	0.0	0.0
MDMA (Ecstasy)[e,f]																								
8th Grade	—	—	—	—	—	2.3	2.3	1.8	1.7	3.1	3.5	+0.5	—	—	—	—	—	1.0	1.0	0.9	0.8	1.4	1.8	+0.4
10th Grade	—	—	—	—	—	4.6	3.9	3.3	4.4	5.4	6.2	+0.8	—	—	—	—	—	1.8	1.3	1.3	1.8	2.6	2.6	0.0
12th Grade	—	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	+1.0	—	—	—	—	—	2.0	1.6	1.5	2.5	3.6	2.8	-0.9
College Students	0.9	2.0	0.8	0.5	2.4	2.8	2.4	3.9	5.5	9.1	9.2	+0.2	0.2	0.4	0.3	0.2	0.7	0.7	0.8	0.8	2.1	2.5	1.5	-0.9
Young Adults	0.8	1.0	0.8	0.7	1.6	1.7	2.1	2.9	3.6	7.2	7.5	+0.3	0.1	0.3	0.3	0.2	0.4	0.3	0.6	0.8	1.3	1.9	1.8	-0.1
Cocaine																								
8th Grade	1.1	1.5	1.7	2.1	2.6	3.0	2.8	3.1	2.7	2.6	2.5	-0.1	0.5	0.7	0.7	1.0	1.2	1.3	1.1	1.4	1.3	1.2	1.2	-0.1
10th Grade	2.2	1.9	2.1	2.8	3.5	4.2	4.7	4.7	4.9	4.4	3.6	-0.8	0.7	0.7	0.9	1.2	1.7	1.7	2.0	2.1	1.8	1.8	1.3	-0.4
12th Grade	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	-0.1	1.4	1.3	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.1	2.1	-0.1
College Students	3.6	3.0	2.7	2.0	3.6	2.9	3.4	4.6	4.6	4.8	4.7	0.0	1.0	1.0	0.7	0.6	0.7	0.8	1.6	1.6	1.2	1.4	1.9	+0.5
Young Adults	6.2	5.7	4.7	4.3	4.4	4.1	4.7	4.9	5.4	5.4	5.8	+0.4	2.0	1.8	1.4	1.3	1.5	1.2	1.6	1.7	1.9	1.7	2.2	+0.6s
Crack																								
8th Grade	0.7	0.9	1.0	1.3	1.6	1.8	1.7	2.1	1.8	1.8	1.7	-0.1	0.3	0.5	0.4	0.7	0.7	0.8	0.7	0.9	0.8	0.8	0.8	0.0
10th Grade	0.9	0.9	1.1	1.4	1.8	2.1	2.2	2.5	2.4	2.2	1.8	-0.4	0.3	0.4	0.5	0.6	0.9	0.8	0.9	1.1	0.8	0.9	0.7	-0.2
12th Grade	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	0.0	0.7	0.6	0.7	0.8	1.0	1.0	0.9	1.0	1.1	1.0	1.1	+0.1
College Students	0.5	0.4	0.6	0.5	1.1	0.6	0.4	1.0	0.9	0.9	0.9	0.0	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.3	0.1	-0.2
Young Adults	1.2	1.4	1.3	1.1	1.1	1.1	1.0	1.1	1.4	1.2	1.3	+0.1	0.4	0.4	0.4	0.3	0.2	0.3	0.3	0.3	0.4	0.4	0.4	0.0

(Table continued on next page)

TABLE 2-2 (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Other Cocaine[g]																								
8th Grade	1.0	1.2	1.3	1.7	2.1	2.5	2.2	2.4	2.3	1.9	1.9	0.0	0.5	0.5	0.6	0.9	1.0	1.0	0.8	1.0	1.1	0.9	0.9	+0.1
10th Grade	2.1	1.7	1.8	2.4	3.0	3.5	4.1	4.0	4.4	3.8	3.0	-0.8s	0.6	0.6	0.7	1.0	1.4	1.3	1.6	1.8	1.6	1.6	1.2	-0.4
12th Grade	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	-0.1	1.2	1.0	1.2	1.3	1.3	1.6	2.0	2.0	2.5	1.7	1.8	+0.1
College Students	3.2	2.4	2.5	1.8	3.3	2.3	3.0	4.2	4.2	4.1	4.1	0.0	1.0	0.9	0.6	0.3	0.8	0.6	1.3	1.5	1.0	0.9	1.5	+0.6
Young Adults	5.4	5.1	3.9	3.6	3.9	3.8	4.3	4.5	4.8	4.8	5.3	+0.4	1.8	1.7	1.1	1.0	1.3	1.1	1.5	1.5	1.6	1.5	1.8	+0.4
Heroin[h]																								
8th Grade	0.7	0.7	0.7	1.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	-0.1	0.3	0.4	0.4	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.6	+0.1
10th Grade	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	-0.4ss	0.2	0.2	0.3	0.4	0.6	0.5	0.6	0.7	0.7	0.5	0.3	-0.2
12th Grade	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	-0.6sss	0.2	0.3	0.2	0.3	0.6	0.5	0.5	0.5	0.5	0.7	0.4	-0.3ss
College Students	0.1	0.1	0.1	0.1	0.3	0.4	0.3	0.6	0.2	0.5	0.4	-0.2	0.1	0.0	*	0.0	0.1	*	0.2	0.1	0.1	0.2	0.1	-0.1
Young Adults	0.1	0.2	0.2	0.1	0.4	0.4	0.3	0.4	0.4	0.4	0.5	+0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	+0.1
With a needle[i]																								
8th Grade	—	—	—	—	0.9	1.0	0.8	0.8	0.9	0.6	0.7	+0.1	—	—	—	—	0.4	0.5	0.4	0.5	0.4	0.3	0.4	0.0
10th Grade	—	—	—	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	-0.1	—	—	—	—	0.3	0.3	0.3	0.4	0.3	0.3	0.2	-0.1
12th Grade	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	-0.1	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	-0.1
College Students	—	—	—	—	0.1	0.0	0.1	0.2	0.1	0.1	0.1	0.0	—	—	—	—	0.0	0.0	0.1	0.0	0.1	0.1	0.0	-0.1
Young Adults	—	—	—	—	0.1	0.1	0.1	0.1	0.1	*	0.3	+0.2	—	—	—	—	0.0	0.0	0.1	*	0.1	*	0.2	+0.2
Without a needle[i]																								
8th Grade	—	—	—	—	0.8	1.0	0.8	0.8	0.9	0.7	0.6	-0.1	—	—	—	—	0.3	0.4	0.4	0.3	0.4	0.3	0.4	+0.1
10th Grade	—	—	—	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	-0.4ss	—	—	—	—	0.3	0.3	0.4	0.5	0.5	0.4	0.2	-0.2s
12th Grade	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	-0.8sss	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	-0.3s
College Students	—	—	—	—	0.0	0.8	0.4	0.9	0.3	0.8	0.6	-0.2	—	—	—	—	0.0	0.1	0.2	0.2	0.3	0.4	0.3	-0.1
Young Adults	—	—	—	—	0.3	0.4	0.4	0.7	0.6	0.5	0.9	+0.4	—	—	—	—	0.1	*	0.1	0.2	0.2	0.2	0.4	+0.3
Other Narcotics[j]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7	-0.2	1.1	1.2	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.9	3.0	0.0
College Students	2.7	2.7	2.5	2.4	3.8	3.1	4.2	4.2	4.3	4.5	5.7	+1.2	0.6	1.0	0.7	0.4	1.2	0.7	1.3	1.1	1.0	1.7	1.7	0.0
Young Adults	2.5	2.5	2.2	2.5	3.0	2.9	3.3	3.4	3.8	4.1	5.0	+0.9s	0.6	0.7	0.7	0.6	0.9	0.7	0.9	0.9	1.2	1.4	1.7	+0.3
Amphetamines[j]																								
8th Grade	6.2	6.5	7.2	7.9	8.7	9.1	8.1	7.2	6.9	6.5	6.7	+0.1	2.6	3.3	3.6	3.6	4.2	4.6	3.8	3.3	3.4	3.4	3.2	-0.3
10th Grade	8.2	8.2	9.6	10.2	11.9	12.4	12.1	10.7	10.4	11.1	11.7	+0.6	3.3	3.6	4.3	4.5	5.3	5.5	5.1	5.1	5.0	5.4	5.6	+0.2
12th Grade	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	+0.4	3.2	2.8	3.7	4.0	4.0	4.1	4.8	4.6	4.5	5.0	5.6	+0.6
College Students	3.9	3.6	4.2	4.2	5.4	4.2	5.7	5.1	5.8	6.6	7.2	+0.5	1.0	1.1	1.5	1.5	2.2	0.9	2.1	1.7	2.3	2.9	3.3	+0.4
Young Adults	4.3	4.1	4.0	4.5	4.6	4.2	4.6	4.5	4.7	5.4	5.8	+0.4	1.5	1.5	1.5	1.7	1.7	1.5	1.7	1.7	1.9	2.3	2.4	+0.1
Methamphetamine[k,l]																								
8th Grade	—	—	—	—	—	—	—	—	3.2	2.5	2.8	+0.2	—	—	—	—	—	—	—	—	1.1	0.8	1.3	+0.4s
10th Grade	—	—	—	—	—	—	—	—	4.6	4.0	3.7	-0.3	—	—	—	—	—	—	—	—	1.8	2.0	1.5	-0.5
12th Grade	—	—	—	—	—	—	—	—	4.7	4.3	3.9	-0.4	—	—	—	—	—	—	—	—	1.7	1.9	1.5	-0.4
College Students	—	—	—	—	—	—	—	—	3.3	1.6	2.4	+0.8	—	—	—	—	—	—	—	—	1.2	0.2	0.5	+0.3
Young Adults	—	—	—	—	—	—	—	—	2.8	2.5	2.8	+0.3	—	—	—	—	—	—	—	—	0.8	0.7	1.0	+0.3

(Table continued on next page)

TABLE 2-2 (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Ice[l]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	+0.3	0.6	0.5	0.6	0.7	1.1	1.1	0.8	1.2	0.8	1.0	1.1	+0.1
College Students	0.1	0.2	0.7	0.8	1.1	0.3	0.8	1.0	0.5	0.5	0.6	+0.1	0.0	0.0	0.3	0.5	0.3	0.1	0.2	0.3	0.0	0.0	0.1	+0.1
Young Adults	0.3	0.4	0.8	0.9	1.2	0.9	0.9	1.1	0.9	1.2	1.1	-0.2	*	0.1	0.3	0.5	0.3	0.3	0.3	0.3	0.4	0.4	0.4	-0.1
Barbiturates[j]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	-0.5	1.4	1.1	1.3	1.7	2.2	2.1	2.1	2.6	2.6	3.0	2.8	-0.2
College Students	1.2	1.4	1.5	1.2	2.0	2.3	3.0	2.5	3.2	3.7	3.8	+0.2	0.3	0.7	0.4	0.4	0.5	0.8	1.2	1.1	1.1	1.1	1.5	+0.4
Young Adults	1.8	1.6	1.9	1.8	2.1	2.2	2.4	2.5	2.8	3.4	3.7	+0.3	0.5	0.5	0.6	0.6	0.8	0.8	0.9	0.9	1.1	1.3	1.7	+0.3
Tranquilizers[b,j]																								
8th Grade	1.8	2.0	2.1	2.4	2.7	3.3	2.9	2.6	2.5	2.6	3.0	+0.4	0.8	0.8	0.9	1.1	1.2	1.5	1.2	1.2	1.1	1.4	1.6	+0.2
10th Grade	3.2	3.5	3.3	3.3	4.0	4.6	4.9	5.1	5.4	5.6	5.9	+0.3	1.2	1.5	1.1	1.5	1.7	1.7	2.2	2.2	2.2	2.5	2.9	+0.3
12th Grade	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7	6.5	+0.8	1.4	1.0	1.2	1.4	1.8	2.0	1.8	2.4	2.5	2.6	3.0	+0.4
College Students	2.4	2.9	2.4	1.8	2.9	2.8	3.8	3.9	3.8	4.2	5.1	+0.9	0.6	0.6	0.4	0.4	0.5	0.7	1.2	1.3	1.1	2.0	1.5	-0.5
Young Adults	3.5	3.4	3.1	2.9	3.4	3.2	3.1	3.8	3.7	4.6	5.5	+0.9s	0.9	1.0	1.0	0.8	1.1	0.7	1.1	1.2	1.3	1.8	2.1	+0.3
Rohypnol[e,m]																								
8th Grade	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.7	+0.2	—	—	—	—	—	0.5	0.3	0.4	0.3	0.3	0.4	+0.1
10th Grade	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	1.0	+0.2	—	—	—	—	—	0.5	0.5	0.4	0.5	0.4	0.2	-0.2
12th Grade	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9	+0.2	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	-0.1
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
GHB[k,p]																								
8th Grade	—	—	—	—	—	—	—	—	—	1.2	1.1	-0.1	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	1.1	1.0	-0.2	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	1.9	1.6	-0.2	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Ketamine[k,p]																								
8th Grade	—	—	—	—	—	—	—	—	—	1.6	1.3	-0.3	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	2.1	2.1	0.0	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	2.5	2.5	0.0	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol,[n] any use																								
8th Grade	54.0	53.7	51.6 45.4	46.8	45.3	46.5	45.5	43.7	43.5	43.1	41.9	-1.2	25.1	26.1	26.2 24.3	25.5	24.6	26.2	24.5	23.0	24.0	22.4	21.5	-0.9
10th Grade	72.3	70.2	69.3 63.4	63.9	63.5	65.0	65.2	62.7	63.7	65.3	63.5	-1.8	42.8	39.9	41.5 38.2	39.2	38.8	40.4	40.1	38.8	40.0	41.0	39.0	-2.0
12th Grade	77.7	76.8	76.0 72.7	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3	+0.1	54.0	51.3	51.0 48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	-0.3
College Students	88.3	86.9	85.1	82.7	83.2	82.9	82.4	84.6	83.6	83.2	83.0	-0.2	74.7	71.4	70.1	67.8	67.5	67.0	65.8	68.1	69.6	67.4	67.0	-0.4
Young Adults	86.9	86.2	85.3	83.7	84.7	84.0	84.3	84.0	84.1	84.0	84.3	+0.3	70.6	69.0	68.3	67.7	68.1	66.7	67.5	66.9	68.2	66.8	67.2	+0.4

(Table continued on next page)

TABLE 2-2 (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Been Drunk[l]																								
8th Grade	17.5	18.3	18.2	18.2	18.4	19.8	18.4	17.9	18.5	18.5	16.6	-1.9s	7.6	7.5	7.8	8.7	8.3	9.6	8.2	8.4	9.4	8.3	7.7	-0.7
10th Grade	40.1	37.0	37.8	38.0	38.5	40.1	40.7	38.3	40.9	41.6	39.9	-1.7	20.5	18.1	19.8	20.3	20.8	21.3	22.4	21.1	22.5	23.5	21.9	-1.6
12th Grade	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	+1.4	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	+0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Cigarettes																								
Any use																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	14.3	15.5	16.7	18.6	19.1	21.0	19.4	19.1	17.5	14.6	12.2	-2.5sss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	20.8	21.5	24.7	25.4	27.9	30.4	29.8	27.6	25.7	23.9	21.3	-2.6ss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	-2.0
College Students	35.6	37.3	38.8	37.6	39.3	41.4	43.6	44.3	44.5	41.3	39.0	-2.3	23.2	23.5	24.5	23.5	26.8	27.9	28.3	30.0	30.6	28.2	25.7	-2.4
Young Adults	37.7	37.9	37.8	38.3	38.8	40.3	41.8	41.6	41.1	40.9	41.1	+0.2	28.2	28.3	28.0	28.0	29.2	30.1	29.9	30.9	30.3	30.1	30.2	+0.1
Bidis[k,l]																								
8th Grade	—	—	—	—	—	—	—	—	—	3.9	2.7	-1.3s	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	6.4	4.9	-1.5s	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	9.2	7.0	-2.2s	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Kreteks[k,l]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	2.6	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco[a,e]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	6.9	7.0	6.6	7.7	7.1	7.1	5.5	4.8	4.5	4.2	4.0	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	10.0	9.6	10.4	10.5	9.7	8.6	8.9	7.5	6.5	6.1	6.9	+0.8
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	10.7	11.1	12.2	9.8	9.7	8.8	8.4	7.6	7.8	+0.2
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[l]																								
8th Grade	1.0	1.1	0.9	1.2	1.0	0.9	1.0	1.2	1.7	1.7	1.6	0.0	0.4	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.7	0.8	0.7	-0.1
10th Grade	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.7	2.2	2.1	-0.1	0.6	0.6	0.5	0.6	0.6	0.5	0.7	0.6	0.9	1.0	0.9	0.0
12th Grade	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	+0.7s	0.8	0.6	0.7	0.9	0.7	0.7	1.0	1.1	0.9	0.8	1.3	+0.5s
College Students	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	0.5	0.4	0.3	0.4	0.5	0.3	0.5	0.4	0.6	0.4	0.4	0.0	0.2	0.1	0.0	0.1	0.2	0.2	0.2	0.2	0.3	0.1	0.1	0.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
'—' indicates data not available. '*' indicates less than .05 percent but greater than 0 percent.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table 2-1 for relevant footnotes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 2-3

Trends in 30-Day Prevalence of Daily Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, College Students, and Young Adults (Ages 19-28)

	Daily											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Marijuana/Hashish, daily[q]												
8th Grade	0.2	0.2	0.4	0.7	0.8	1.5	1.1	1.1	1.4	1.3	1.3	0.0
10th Grade	0.8	0.8	1.0	2.2	2.8	3.5	3.7	3.6	3.8	3.8	4.5	+0.7s
12th Grade	2.0	1.9	2.4	3.6	4.6	4.9	5.8	5.6	6.0	6.0	5.8	-0.2
College Students	1.8	1.6	1.9	1.8	3.7	2.8	3.7	4.0	4.0	4.6	4.5	0.0
Young Adults	2.3	2.3	2.4	2.8	3.3	3.3	3.8	3.7	4.4	4.2	5.0	+0.8s
Alcohol[n,q]												
Any daily use												
8th Grade	0.5	0.6	0.8	—	—	—	—	—	—	—	—	—
			1.0	1.0	0.7	1.0	0.8	0.9	1.0	0.8	0.9	+0.1
10th Grade	1.3	1.2	1.6	—	—	—	—	—	—	—	—	—
			1.8	1.7	1.7	1.6	1.7	1.9	1.9	1.8	1.9	+0.1
12th Grade	3.6	3.4	2.5	—	—	—	—	—	—	—	—	—
			3.4	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6	+0.7ss
College Students	4.1	3.7	3.9	3.7	3.0	3.2	4.5	3.9	4.5	3.6	4.7	+1.0
Young Adults	4.9	4.5	4.5	3.9	3.9	4.0	4.6	4.0	4.8	4.1	4.4	+0.3
Been Drunk, daily[j,q]												
8th Grade	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.0
10th Grade	0.2	0.3	0.4	0.4	0.6	0.4	0.6	0.6	0.7	0.5	0.6	+0.1
12th Grade	0.9	0.8	0.9	1.2	1.3	1.6	2.0	1.5	1.9	1.7	1.4	-0.3
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—
5+ drinks in a row in last 2 weeks												
8th Grade	12.9	13.4	13.5	14.5	14.5	15.6	14.5	13.7	15.2	14.1	13.2	-0.9
10th Grade	22.9	21.1	23.0	23.6	24.0	24.8	25.1	24.3	25.6	26.2	24.9	-1.3
12th Grade	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	-0.3
College Students	42.8	41.4	40.2	40.2	38.6	38.3	40.7	38.9	40.0	39.3	40.9	+1.6
Young Adults	34.7	34.2	34.4	33.7	32.6	33.6	34.4	34.1	35.8	34.7	35.9	+1.2
Cigarettes												
Any daily use												
8th Grade	7.2	7.0	8.3	8.8	9.3	10.4	9.0	8.8	8.1	7.4	5.5	-1.9sss
10th Grade	12.6	12.3	14.2	14.6	16.3	18.3	18.0	15.8	15.9	14.0	12.2	-1.8s
12th Grade	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	-1.6
College Students	13.8	14.1	15.2	13.2	15.8	15.9	15.2	18.0	19.3	17.8	15.0	-2.8s
Young Adults	21.7	20.9	20.8	20.7	21.2	21.8	20.6	21.9	21.5	21.8	21.2	-0.6
1/2 pack+/day												
8th Grade	3.1	2.9	3.5	3.6	3.4	4.3	3.5	3.6	3.3	2.8	2.3	-0.4
10th Grade	6.5	6.0	7.0	7.6	8.3	9.4	8.6	7.9	7.6	6.2	5.5	-0.6
12th Grade	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	-1.0
College Students	8.0	8.9	8.9	8.0	10.2	8.4	9.1	11.3	11.0	10.1	7.8	-2.4s
Young Adults	16.0	15.7	15.5	15.3	15.7	15.3	14.6	15.6	15.1	15.1	14.6	-0.4
Smokeless Tobacco, daily[e,q]												
8th Grade	1.6	1.8	1.5	1.9	1.2	1.5	1.0	1.0	0.9	0.9	1.2	+0.3
10th Grade	3.3	3.0	3.3	3.0	2.7	2.2	2.2	2.2	1.5	1.9	2.2	+0.4
12th Grade	—	4.3	3.3	3.9	3.6	3.3	4.4	3.2	2.9	3.2	2.8	-0.4
College Students	—	—	—	—	—	—	—	—	—	—	—	—
Young Adults	—	—	—	—	—	—	—	—	—	—	—	—

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table 2-1 for relevant footnotes.

SOURCE: The Monitoring the Future Study, the University of Michigan.

Chapter 3

STUDY DESIGN AND PROCEDURES

Monitoring the Future has a complex cohort-sequential design appropriate for distinguishing and explaining three types of change: period-related, age-related, and cohort-related. This chapter contains a description of this research design, including the sampling plans and field procedures used in both the in-school surveys of the eighth-, tenth-, and twelfth-grade students and the follow-up surveys of younger and middle-aged adults. Related methodological issues such as response rates, population coverage, and the validity of the measures are also discussed. We begin with a description of the design that has been used consistently over twenty-seven years to survey high school seniors; then we describe the more recently instituted design for eighth and tenth graders. Finally, the designs for the *follow-up* surveys of former twelfth graders, and former eighth and tenth graders, are covered.[13,14]

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF SENIORS

The data from high school seniors have been collected during the spring of each year starting with the class of 1975. Each year's data collection takes place in between 123 to 146 public and private high schools selected to provide an accurate representative cross section of high school seniors throughout the coterminous United States (see Figure 3-1).

The Population Under Study

The senior year of high school was chosen as an optimal point for monitoring the drug use and related attitudes of youth for several reasons. First, completion of high school represents the end of an important developmental stage in this society because it demarcates both the end of universal education and, for many, the end of living in the parental home. Therefore, it is a logical point at which to take stock of the cumulated influences of these two environments on American youth. Further, completion of high school represents the jumping-off point from which young people diverge into widely differing social environments and experiences. Senior year, then, represents a good time to take a "before" measure that allows calculation of changes that may be attributable to the many environmental and role transitions that occur in young adulthood. Finally, there were some important practical advantages to building the original system of data

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[13] For a more detailed description of the study design, see Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (2001). *The Monitoring the Future project after twenty-seven years: Design and procedures.* (Monitoring the Future Occasional Paper No. 54.) Ann Arbor, MI: Institute for Social Research.

[14] For a more detailed description of the full range of research objectives of Monitoring the Future, see Johnston, L. D., O'Malley, P. M., Schulenberg, J., & Bachman, J. G. (2001). *The aims and objectives of the Monitoring the Future study and progress toward fulfilling them as of 2001.* (Monitoring the Future Occasional Paper No. 52.) Ann Arbor, MI: Institute for Social Research.

collections around samples of high school seniors. The need for systematically repeated, large-scale samples from which to make reliable estimates of change requires that considerable stress be laid on cost efficiency as well as feasibility. The last year of high school constitutes the final point at which a reasonably good national sample of an age-specific cohort can be drawn and studied economically.

The Omission of Dropouts

One limitation in the study design is the exclusion of those young men and women who drop out of high school before graduation—between 15 and 20 percent of each age cohort nationally, according to U.S. Census statistics. Clearly, the omission of high school dropouts introduces biases in the estimation of certain characteristics of the entire age group; however, for most purposes, the small proportion of dropouts sets outer limits on the bias. Further, since the bias from missing dropouts should remain just about constant from year to year, their omission should introduce little or no bias in *change* estimates. Indeed, we believe the changes observed over time for those who finish high school are likely to parallel the changes for dropouts in most instances. Appendix A to Volume I addresses the likely effects of the exclusion of dropouts on estimates of prevalence of drug use and trends in drug use among the entire age cohort; the reader is referred there for a more detailed discussion of this issue.

Sampling Procedures

A multi-stage random sampling procedure is used to secure the nationwide sample of high school seniors each year. Stage 1 is the selection of particular geographic areas, Stage 2 is the selection (with probability proportionate to size) of one or more high schools in each area, and Stage 3 is the selection of seniors within each high school. Within each school, up to about 350 seniors may be included. In schools with fewer seniors, the usual procedure is to include all of them in the data collection, though a smaller sample is sometimes taken to accommodate the needs of the school. When a subset of seniors is to be selected, it is done either by randomly sampling entire classrooms or by some other unbiased, random method. Weights are assigned to compensate for differential probabilities of selection at each stage. Final weights are normalized to average 1.0 (so that the weighted number of cases equals the unweighted number of cases overall). This three-stage sampling procedure has yielded the numbers of participating schools and students over the years shown in Table 3-1.

Questionnaire Administration

About ten days before the questionnaire administration date, the target respondents are given flyers explaining the study. Local Institute for Social Research representatives and their assistants conduct the actual questionnaire administrations following standardized procedures that are detailed in a project instruction manual. The questionnaires are administered in classrooms during a normal class period whenever possible; however, circumstances in some schools require the use of larger group administrations.

Questionnaire Format

Because many questions are needed to cover all of the topic areas in the study, much of the questionnaire content intended for high school seniors is divided into six different questionnaire forms distributed to participants in an ordered sequence that ensures six virtually identical random sub-samples. (Five questionnaire forms were used between 1975 and 1988.) About one-third of each questionnaire form consists of key, or "core," variables common to all forms. All demographic variables, and nearly all of the drug *use* variables included in this report, are contained in this core set of measures. Many of the questions dealing with attitudes, beliefs, and perceptions of relevant features of the social environment are in a single form only, and the data are thus based on one-fifth as many cases in 1975-1988 (approximately 3,300) and on one-sixth as many cases in 1989-2001 (approximately 2,600). All tables in this report list the sample sizes upon which the statistics are based, stated in terms of the weighted number of cases (which is roughly equivalent to the actual number of cases).

RESEARCH DESIGN AND PROCEDURES FOR THE SURVEYS OF LOWER GRADES

Beginning in 1991, there was an important expansion of the study to include nationally representative samples of eighth- and tenth-grade students. Surveys at these two grade levels have been conducted on an annual basis since 1991.

In general, the procedures used for the annual in-school surveys of eighth- and tenth-grade students closely parallel those used for high school seniors, including the procedures for selecting schools and students, questionnaire administration, and questionnaire formats. A major exception is that only two different questionnaire forms were used from 1991 to 1996, expanding to four forms beginning in 1997 rather than the six used with seniors. Eighth and tenth grades both receive the same questionnaire forms and, for the most part, the questionnaire content is drawn from the twelfth-grade questionnaires. Thus, key demographic variables and measures of drug use and related attitudes and beliefs are generally identical for all three grades. The forms used in both eighth and tenth grades have a common core (Parts B and C) that parallels the core used in twelfth-grade forms. Many fewer questions about lifestyles and values are included in the eighth- and tenth-grade forms, in part because we think that many of these attitudes are likely to be more fully formed by twelfth grade and, therefore, are best monitored there. For the national survey of eighth graders each year, approximately 155 schools (mostly junior high schools and middle schools) are sampled, and approximately 17,000 to 19,000 students are surveyed. For the tenth graders, approximately 130 high schools are sampled, and from 14,000 to 17,000 students are surveyed. (See Table 3-1 for specifics.)

The research design originally called for follow-up surveys of subsamples of the eighth and tenth graders participating in the study, carried out at two-year intervals, similar to the twelfth-grade follow-up samples. From 1991 to 1994, this plan influenced the design of the cross-sectional studies of eighth and tenth graders in an important way. In order to "recapture" many of the eighth-grade participants two years later in the normal tenth-grade cross-sectional study for that year, we selected the eighth-grade schools by drawing a sample of high schools and then selecting a sample of their "feeder schools" that contained eighth graders. This extra stage in the sampling process meant that many of the eighth-grade participants in, say, the 1991 cross-sectional survey were also participants in the 1993 cross-sectional survey of tenth graders. Thus, a fair amount of panel data was generated at no additional cost. However, having followed this design from 1991 through 1993, we concluded that the saving in follow-up costs did not justify the complexities in sampling, administration, and interpretation. Therefore, since 1994, we have used a simplified design in which eighth-grade schools were drawn independently of the tenth-grade school sample. Further follow-ups (at two-year intervals) were conducted only on panels of students drawn from the first three cohorts of students surveyed in the eighth and tenth grades, that is, those surveyed in school in 1991, 1992, and 1993.

When follow-up surveys of new cohorts of eighth and tenth graders were no longer being conducted, the collection of personal identification information for follow-up purposes was no longer a necessity. For confidentiality reasons, this personal information had been gathered on a tear-off sheet at the back of each questionnaire. We felt that there were potential advantages in moving toward a fully anonymous procedure for these grade levels, including the following: (a) school cooperation might be easier to obtain; (b) any suppression effect that the confidential mode of administration might have could be both eliminated and quantified; and (c) if there *were* any mode of administration effect, it would be removed from the national data, which are widely used for comparison purposes in state and local surveys (nearly all of which use anonymous questionnaires), and thus make those comparisons more valid. Therefore, in 1998 for the first time, in half of the eighth- and tenth-grade schools surveyed, the questionnaires administered were made fully anonymous. Specifically, the half-sample of schools beginning their two-year participation in Monitoring the Future in 1998 received the anonymous questionnaires, while the half-sample participating in the study for their second and final year continued to get the confidential questionnaires.

A careful examination of the 1998 results, based on the two equivalent half-samples at grade 8, and also at grade 10, revealed that there was no effect of this methodological change among tenth graders, and, at most, only a very modest effect in the self-reported substance use rates among eighth graders (with prevalence rates slightly higher in the anonymous condition). The net effect of this methodological change is a possible increase in the observed eighth-grade prevalence estimates for marijuana, alcohol, and cigarettes in 1998 from what they would have been had there been no change in questionnaire administration. For those three drugs, that means that the declines in use in 1998 may be slightly understated for the eighth graders only. In other words, the direction of the change is the same as that shown in the tables, but the actual declines may be slightly larger than those shown. For example, the annual prevalence of marijuana use among eighth graders is shown to have fallen by 0.8 percentage points between 1997 and 1998; however, the half-sample of eighth-grade schools receiving exactly the same type of questionnaire that was used in 1997 showed a slightly greater decline of 1.5 percentage points.

For cigarettes, this change in method appeared to have no effect on self-reported rates of daily use or half-pack per day use, and to have had only a very small effect on 30-day prevalence. Thus, for example, the 30-day prevalence of cigarette use among all of the eighth graders surveyed is shown to have fallen 0.3 percentage points between 1997 and 1998; while the half-sample of eighth-grade schools receiving exactly the same type of questionnaire as was used in 1997 showed a slightly greater decline of 0.6 percentage points. Finally, lifetime cigarette prevalence is shown as falling by 1.6 percentage points between 1997 and 1998, but in the half-sample of schools with a constant methodology, it fell by 2.6 percentage points.

We have examined the effects of mode of administration in detail in a published journal article, in which we use multivariate controls to assess the effects of the change on the eighth-grade self-report data. It generally shows even less effect than is to be found without such controls.[15]

All tables and figures in Volume I use data from both half-samples of eighth graders, combined. This is also true for the tenth graders (for whom we found no methodological effect) and the twelfth graders (for whom it is assumed there is no such effect since none was found among the tenth graders). In 1999 the remaining half of the participating schools (all beginning the first of their two years of participation) received anonymous questionnaires, as well. Thus, from 1999 on, all data from eighth- and tenth-grade students are gathered using anonymous questionnaires. We continue to use confidential questionnaires with twelfth graders in order to permit follow-up of those who are randomly selected into the panel studies.

RESEARCH DESIGN AND PROCEDURES FOR THE FOLLOW-UP SURVEYS OF SENIORS

Beginning with the graduating class of 1976, each senior class has been followed up annually on a continuing basis after high school for seven follow-up data collections, which corresponds to their reaching a modal age of 32.[16] From the roughly 15,000 to 17,000 seniors originally participating in a given senior class, a representative sample of 2,400 individuals is chosen for follow-up. In order to ensure sufficient numbers of drug users in the follow-up surveys, seniors reporting 20 or more occasions of using marijuana in the previous 30 days, or any use of any of the other illicit drugs in the previous 30 days, are selected with higher probability (by a factor of 3.0) than the remaining seniors. Differential weighting is then used in all follow-up analyses to compensate for these differential sampling probabilities. Because those in the drug-using stratum receive a weight of only 0.33 in the calculation of all statistics to correct for their over-representation at the selection stage, there are actually more follow-up respondents than are reported in the weighted Ns given in the tables.

The 2,400 selected respondents from each class are randomly split into two matching groups of 1,200 each—one group to be surveyed on even-numbered calendar years, and the other group to be surveyed on odd-numbered years. This two-year cycle is intended to reduce the burden on individual respondents, thus yielding a better retention rate across the years. By alternating the two half-samples, we have data from a given graduating class every year, even though any given respondent participates only every other year.

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[15] O'Malley, P. M., Johnston, L. D., Bachman, J. G., & Schulenberg, J. (2000). A comparison of confidential versus anonymous survey procedures: Effects on reporting of drug use and related attitudes and beliefs in a national study of students. *Journal of Drug Issues, 30,* 35-54.

[16] Further follow-ups occur (or will occur) at half-decade intervals, beginning with age 35.

Follow-Up Procedures

Using information provided by high school senior respondents on a tear-off card (containing the respondent's name, address, phone number, and the name and address of someone who would always know how to reach them), mail contact is maintained with the subset of people selected for inclusion in the follow-up panels. Newsletters are sent to them each year, and name and address corrections are requested. Questionnaires are sent to each individual biennially in the spring of each year by certified mail. A check for $10.00, made payable to the respondent, is attached to the front of each questionnaire.[17] Reminder letters and postcards are sent at fixed intervals thereafter; finally, those who have not responded receive a prompting phone call from the Survey Research Center's phone interviewing facility in Ann Arbor. If requested, a second copy of the questionnaire is sent; but no questionnaire content is administered by phone. If a respondent asks not to be bothered further, that wish is honored.

Panel Retention Rates

To date, an average of approximately 70% of those selected for inclusion in follow-up panels have returned questionnaires in the first follow-up after high school, though that number has fallen to an average return of 65% over the most recent five years. The retention rate in a given cohort declines across time, as would be expected. The 2001 panel retention from the class of 1987—the oldest of the panels in the seven biennial follow-ups, now age 32 (14 years past their first data collection in high school)—was 51%. For the longer-term panels, the 2001 retention rate for 35-year-olds was 50% and for 40-year-olds, 59%.

Corrections for Panel Attrition

Because, to a modest degree, attrition is associated with drug use, we have introduced corrections into the prevalence of use estimates for the follow-up panels. These corrections raise the prevalence estimates above the uncorrected ones, but only slightly. We believe the resulting estimates to be the most accurate obtainable for the population of high school senior graduates but still low for the age group as a whole, due to the omission of dropouts and absentees from the population covered by the original panels.[18]

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[17] Note that, for the class of 1991 and all prior classes, the follow-up checks were for $5.00. The rate was raised, beginning with the class of 1992, to compensate for the effects of inflation over the life of the study. An experiment was first conducted that suggested that the increased payment was justified based on the increased panel retention it achieved.

[18] The intent of the weighting process is to correct for the effects of differential attrition on follow-up drug use estimates. Different weights are used for different substances. Cigarettes, alcohol, and marijuana each have one weight for every follow-up of each graduating class. The weights are based on the observed differences in the distribution on an index of twelfth-grade use of the relevant substance for the follow-up sample compared to the distribution based on the full base-year sample. For example, the distribution on the index of marijuana use in the 1988 follow-up of approximately 1,000 respondents from the class of 1976 was compared to the original 1976 base-year distribution for the entire participating base-year class of 17,000 respondents; and weights were derived that, when applied to the base-year data for only those participating in the 1988 follow-up, would reproduce the original base-year frequency distribution of marijuana use. A similar procedure is used to determine a weight for all illicit drugs other than marijuana combined. In this case, however, an average weight is derived across graduating classes. Thus, the same weight is applied, for example, to all respondents in the follow-up of 1988, regardless of when they graduated from high school.

Follow-Up Questionnaire Format

The questionnaires used in the follow-up surveys are very much like those used in the senior year. They are optically scanned; they contain a core section on drug use and background and demographic factors common to all forms; and they have questions about a wide range of topics at the beginning and ending sections, many of which are unique to each questionnaire form. Many of the questions asked of seniors are retained in the follow-up questionnaires, and respondents are consistently mailed the same version (or form) of the questionnaire that they first received in senior year, so that changes over time in their behaviors, attitudes, experiences, and so forth can be measured. Questions specific to high school status and experiences are dropped in the follow-up, of course, and questions relevant to post-high school status and experiences are added. Thus, there are questions about college, military service, civilian employment, marriage, parenthood, and so on.

For the early follow-up cohorts, the numbers of cases on single-form questions were one-fifth the size of the total follow-up sample because five different questionnaire forms were used. Beginning with the Class of 1989, a sixth form was introduced in senior year. That new questionnaire form was first sent to follow-up respondents in 1990; single-form data since then have Ns one-sixth the total follow-up sample size. In the follow-up studies, single-form samples from a single cohort are too small to make reliable estimates; therefore, in most cases where they are reported, the data from several adjacent cohorts are combined or concatenated.

REPRESENTATIVENESS AND SAMPLE ACCURACY

School Participation

Schools are invited to participate in the study for a two-year period. For each school that declines to participate, a similar school (in terms of size, geographic area, urbanicity, etc.) is recruited as a replacement for that "slot." In 2001, either an original school or a replacement school was obtained in 98% of the sample units, or "slots." With very few exceptions, each school participating in the first year has agreed to participate in the second year as well. Figure 3-2 provides the year-specific school participation rates and the percentage of "slots" filled since 1977. (The data for the years prior to 1991 are for twelfth grade only; beginning in 1991, the data are for eighth, tenth, and twelfth grades combined.) As shown in the table, replacements for declining schools are obtained in the vast majority of cases.

There are two questions that are sometimes raised with respect to school participation rates: (1) Are participation rates so low as to compromise the representativeness of the sample? (2) Does variation in participation rates over time contribute to changes in estimates of drug use?

With respect to the first issue, the selection of replacement schools (which occurs in practically all instances of an original school refusal) almost entirely removes problems of bias in region, urbanicity, and the like, that might result from certain schools refusing to participate. Other potential biases could be more subtle, however. If, for example, it turned out that most schools with "drug problems" refused to participate, the sample would be seriously biased. And if any other single factor were dominant in most refusals, that reason for refusal also might suggest a source of serious bias. In fact, however, the reasons given for a school refusing to participate tend to be varied and are often a function of happenstance events specific to that particular year; only a very small proportion specifically object to the drug-related or "sensitive" nature of the content of the survey.

If it were the case that schools differed substantially in drug use, then which particular schools participated could have a greater effect on estimates of drug use. However, the great majority of variance in drug use lies within schools, not between schools. For example, for tenth graders in 1992, between-schools variance for marijuana use was 4%-6% of the total variance (depending on the specific measure); for inhalant use, 1%-2%; for LSD, 2%-4%; for crack cocaine, 1.0%-1.5%; for alcohol use, 4%-5%; and for cigarette use, 3%-4%. (Eighth- and twelfth-grade values are similar.) To the extent that schools tend to be fairly similar in drug use, then which particular schools participate (within a selection framework that seeks national representation) has a smaller effect on estimates of drug use. The fact that the overwhelming majority of variance in drug use lies within schools implies that, at least with respect to drug use, schools are for the most part fairly similar.[19] Further, some, if not most, of the between-schools variance is due to differences related to region, urbanicity, etc.—factors that remain well controlled in the present sampling design because of the way in which replacement schools are selected.

With respect to the second issue, the observed data from the series make it extremely unlikely that results have been significantly affected by changes in response rate. If changes in response rates seriously affected prevalence estimates, there would be noticeable bumps up or down in concert with the changing rates. But in fact the trend figures that result from this series of surveys are very smooth and change in a very orderly fashion from one year to the next. This suggests very strongly that the level of school-related error in the estimates does not vary much over time. Moreover, the fact that different substances trend in very different ways further refutes any likelihood that changes in response rates are affecting prevalence estimates. We have observed, for example, marijuana use decreasing while cocaine use was stable (in the early 1980s); alcohol use declining while cigarette use was stable (in the mid- to late 1980s); marijuana use increasing while inhalant use was decreasing (from 1994 to 1997). All of these patterns are explainable in terms of psychological, social, and cultural factors (as described in this and previous volumes in this series), and cannot be explained by changes in response rates.

Of course, there could be some sort of a constant bias across the years, but even in the unlikely event that there was, it seems highly improbable that it would be of much consequence for policy purposes, given that it would not affect trends and likely would have a very modest effect on prevalence rates. Thus we have a high degree of confidence that school refusal rates have not seriously biased the survey results.

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[19] Among the schools that actually participated in the study, there is very little difference in substance use rates between the schools that were original selections, taken as a set, and the schools that were replacement schools. Averaged over the years 1991 through 2000, for grades 8, 10, and 12 combined, the difference between original schools and replacement schools averaged 0.03% in the observed prevalence rates averaged across two indexes of annual illicit drug use, the annual prevalence of each of the major illicit drug classes, and several measures of alcohol and cigarette use. For the individual drugs and drug indexes, the differences between the original and replacement schools, averaged across grades and years, fell within ±0.9%.

At each grade level, schools are selected in such a way that half of each year's sample is comprised of schools that participated the previous year, and half is comprised of schools that will participate the next year. (Both of these samples are national replicates, meaning that each is drawn to be nationally representative by itself.) This staggered half-sample design is used to check on possible errors in the year-to-year trend estimates due to school turnover. For example, separate sets of one-year trend estimates are computed based on students in the half-sample of schools that participated in both 1999 *and* 2000, then based on the students in the half-sample that participated in both 2000 *and* 2001, and so on. Thus, each one-year *matched half-sample* trend estimate derived in this way is based on a constant set of schools (about 65 in 12th grade, for example). When the trend data derived from the matched half-sample (examined separately for each class of drugs) are compared with trends based on the total sample of schools, the results are usually highly similar, indicating that the trend estimates are little affected by turnover or shifting refusal rates in the school samples. As would be expected, the *absolute* prevalence of use estimates for a given year are not as accurate using just the half-sample because the sample size is only half as large.

Student Participation

In 2001, completed questionnaires were obtained from 90% of all sampled students in eighth grade, 88% in tenth grade, and 82% in twelfth grade. (See Table 3-1 for response rates in earlier years.) The single most important reason that students are missed is absence from class at the time of data collection; in most cases, for reasons of cost efficiency, we do not schedule special follow-up data collections for absent students. Students with fairly high rates of absenteeism also report above-average rates of drug use; therefore, some degree of bias is introduced into the prevalence estimates by missing the absentees. Much of that bias could be corrected through the use of special weighting based on the reported absentee rates of the students who *did* respond; however, we decided not to use such a weighting procedure because the bias in overall drug use estimates was determined to be quite small *and* because the necessary weighting procedures would have introduced greater sampling variance in the estimates. Appendix A in an earlier report[20] provides a discussion of this point, and Appendix A in this Volume illustrates the changes in trend and prevalence estimates that would result if corrections for absentees had been included. Of course, some students are not absent from class but simply refuse, when asked, to complete a questionnaire. However, the proportion of explicit refusals amounts to less than 1.5% of the target sample for each grade.

Sampling Accuracy of the Estimates

Confidence intervals (95%) are provided in Tables 4-1a through 4-1d for lifetime, annual, 30-day, and daily prevalence of use for eighth-, tenth-, and twelfth-grade students. As can be seen in Table 4-1a, confidence intervals for lifetime prevalence for seniors average less than ±1.5% across a variety of drug classes. That is, if we took a large number of samples of this size from the universe of all schools containing twelfth graders in the coterminous United States, 95 times out of 100 the sample would yield a result that would be less than 1.5 percentage points divergent from the result we would get from a comparable massive survey of *all* seniors in *all* schools. This is a high level of sampling accuracy, and it should permit detection of fairly small changes from one year to the next. Confidence intervals for the other prevalence periods (past 12 months, past 30 days, and current daily use) are generally smaller than those for lifetime use. In general, confidence intervals for eighth and tenth graders are very similar to those observed for twelfth graders. Some drugs are measured on only one or two forms (smokeless tobacco, PCP, nitrites, and others, as indicated in Table 2-1 footnotes); these drugs will have somewhat larger confidence intervals due to their smaller sample sizes. Appendix C contains information for the interested reader on how to calculate confidence intervals around other point estimates; it also provides the information needed to compare trends across time or to test the significance of differences between subgroups in any given year.

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[20] Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1984). *Drugs and American high school students: 1975-1983.* DHHS (ADM) 85-1374. Washington, D.C.: U.S. Government Printing Office.

VALIDITY OF THE MEASURES OF SELF-REPORTED DRUG USE

Are sensitive behaviors such as drug use honestly reported? Like most studies dealing with sensitive behaviors, we have no direct, totally objective validation of the present measures; however, the considerable amount of existing inferential evidence strongly suggests that the self-report questions used in MTF produce largely valid data. A more complete discussion of the contributing evidence that leads to this conclusion may be found in other publications; here we will only briefly summarize the evidence.[21]

First, using a three-wave panel design, we established that the various measures of self-reported drug use have a high degree of reliability—a necessary condition for validity.[22] In essence, respondents were highly consistent in their self-reported behaviors over a three- to four-year time interval. Second, we found a high degree of consistency among logically related measures of use within the same questionnaire administration. Third, the proportion of seniors reporting some illicit drug use by senior year has reached two-thirds of all respondents in peak years and over 80% in some follow-up years, constituting *prima facie* evidence that the degree of underreporting must be very limited. Fourth, the seniors' reports of use by their unnamed friends—about whom they would presumably have less reason to distort reports of use—has been highly consistent with self-reported use in the aggregate in terms of both prevalence *and* trends in prevalence, as will be discussed later in this report. Fifth, we have found self-reported drug use to relate in consistent and expected ways to a number of other attitudes, behaviors, beliefs, and social situations—in other words, there is strong evidence of "construct validity." Sixth, the missing data rates for the self-reported use questions are only very slightly higher than for the preceding nonsensitive questions, in spite of explicit instructions to respondents immediately preceding the drug section to leave blank those drug use questions they felt they could not answer honestly. Seventh, an examination of consistency in reporting of lifetime use conducted on the long-term panels of graduating seniors found quite low levels of recanting of earlier-reported use of the illegal drugs.[23] There was a higher level of recanting for the psychotherapeutic drugs, which we interpreted as suggesting that adolescents actually may overestimate their use of some of these drugs because of misinformation about definitions that get corrected as they get older. Finally, the great majority of respondents, when asked, say they would answer such questions honestly if they were users.[24]

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[21] Johnston, L. D., & O'Malley, P. M. (1985). Issues of validity and population coverage in student surveys of drug use. In B. A. Rouse, N. J. Kozel, & L. G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity* (NIDA Research Monograph No. 57 (ADM) 85-1402). Washington, D.C.: U.S. Government Printing Office; Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1984). *Drugs and American high school students: 1975-1983*. DHHS (ADM) 85-1374. Washington, D.C.: U.S. Government Printing Office; Wallace, J. M., Jr., & Bachman, J. G. (1993). Validity of self-reports in student-based studies on minority populations: Issues and concerns. In M. de LaRosa (Ed.), *Drug abuse among minority youth: Advances in research and methodology*. NIDA Research Monograph. Rockville, MD: National Institute on Drug Abuse.

[22] O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1983). Reliability and consistency in self-reports of drug use. *International Journal of the Addictions, 18*, 805-824.

This is not to argue that self-reported measures of drug use are valid in all cases. In the present study we have gone to great lengths to create a situation and set of procedures in which students feel that their confidentiality will be protected. We have also tried to present a convincing case as to why such research is needed. We think the evidence suggests that a high level of validity has been obtained. Nevertheless, insofar as any remaining reporting bias exists, we believe it to be in the direction of underreporting. Thus, we believe our estimates to be lower than their true values, even for the obtained samples, but not substantially so.

One procedure we undertake to help assure the validity of our data is worth noting. We check for logical inconsistencies in the triplets of answers about the use of each drug (i.e., about lifetime, past year, and past 30-day use), and if a respondent exceeds a minimum number of inconsistencies, his or her record is deleted from the data set. Similarly, we check for improbably high rates of use of multiple drugs and delete such cases, on the assumption that the respondents are not taking the task seriously. Relatively few cases are eliminated for these reasons.

Consistency and the Measurement of Trends

One further point is worth noting in a discussion of the validity of the findings. The Monitoring the Future project is designed to be sensitive to changes from one time period to another. One great strength of this study, in our opinion, is that the measures and procedures have been standardized and applied consistently across many years. To the extent that any biases remain because of limits in school and/or student participation, and to the extent that there are distortions (lack of validity) in the responses of some students, it seems very likely that such problems will exist in much the same way from one year to the next. In other words, biases in the survey estimates will tend to be consistent from one year to another, which means that our measurement of *trends* should be affected very little by any such biases. The smooth and consistent nature of most trend curves reported for the various drugs provides rather compelling empirical support for this assertion.

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[23] Johnston, L. D. & O'Malley, P. M. (1997). The recanting of earlier reported drug use by young adults. In Harrison, L. (Ed.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (pp. 59-80). (NIDA Research Monograph 167, pp 59-79). Rockville, MD: National Institute on Drug Abuse.

[24] For a discussion of reliability and validity of student self-report measures of drug use like those used in Monitoring the Future across varied cultural settings, see also Johnston, L. D., Driessen, F. M. H. M., & Kokkevi, A. (1994). *Surveying student drug misuse: A six-country pilot study.* Strasbourg, France: Council of Europe.

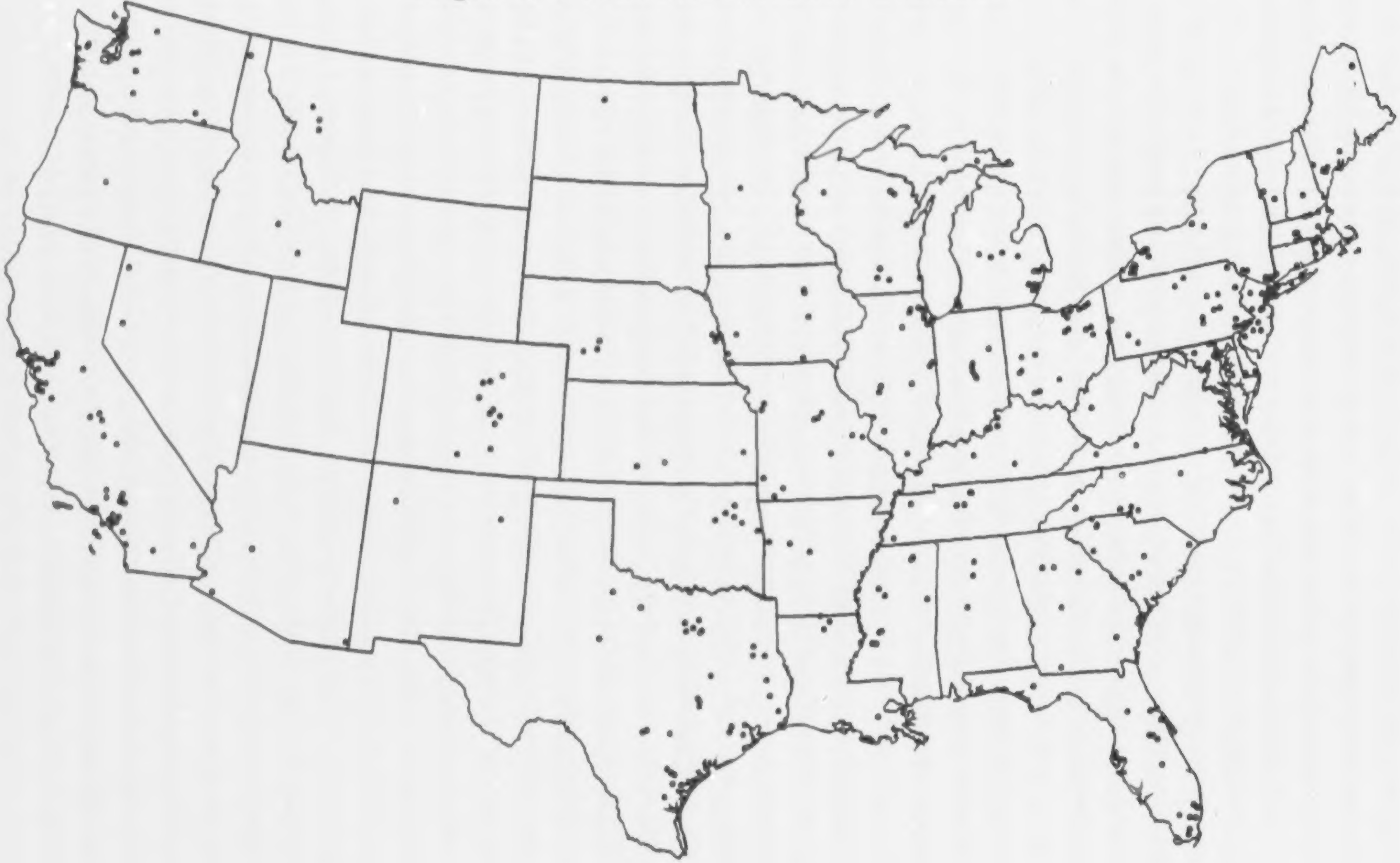
TABLE 3-1

Sample Sizes and Response Rates

	Number of Public Schools			Number of Private Schools			Total Number of Schools				Total Number of Students				Student Response Rate		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	Total	8th	10th	12th	Total	8th	10th	12th
1975	—	—	111	—	—	14	—	—	125	—	—	—	15,791	—	—	—	78%
1976	—	—	108	—	—	15	—	—	123	—	—	—	16,678	—	—	—	77
1977	—	—	108	—	—	16	—	—	124	—	—	—	18,436	—	—	—	79
1978	—	—	111	—	—	20	—	—	131	—	—	—	18,924	—	—	—	83
1979	—	—	111	—	—	20	—	—	131	—	—	—	16,662	—	—	—	82
1980	—	—	107	—	—	20	—	—	127	—	—	—	16,524	—	—	—	82
1981	—	—	109	—	—	19	—	—	128	—	—	—	18,267	—	—	—	81
1982	—	—	116	—	—	21	—	—	137	—	—	—	18,348	—	—	—	83
1983	—	—	112	—	—	22	—	—	134	—	—	—	16,947	—	—	—	84
1984	—	—	117	—	—	17	—	—	134	—	—	—	16,499	—	—	—	83
1985	—	—	115	—	—	17	—	—	132	—	—	—	16,502	—	—	—	84
1986	—	—	113	—	—	16	—	—	129	—	—	—	15,713	—	—	—	83
1987	—	—	117	—	—	18	—	—	135	—	—	—	16,843	—	—	—	84
1988	—	—	113	—	—	19	—	—	132	—	—	—	16,795	—	—	—	83
1989	—	—	111	—	—	22	—	—	133	—	—	—	17,142	—	—	—	86
1990	—	—	114	—	—	23	—	—	137	—	—	—	15,676	—	—	—	86
1991	131	107	117	31	14	19	162	121	136	419	17,844	14,996	15,483	48,323	90%	87%	83
1992	133	106	120	26	19	18	159	125	138	422	19,015	14,997	16,251	50,263	90	88	84
1993	126	111	121	30	17	18	156	128	139	423	18,820	15,516	16,763	51,099	90	86	84
1994	116	116	119	34	14	20	150	130	139	419	17,708	16,080	15,929	49,717	89	88	84
1995	118	117	120	34	22	24	152	139	144	435	17,929	17,285	15,876	51,090	89	87	84
1996	122	113	118	30	20	21	152	133	139	424	18,368	15,873	14,824	49,065	91	87	83
1997	125	113	125	27	18	21	152	131	146	429	19,066	15,778	15,963	50,807	89	86	83
1998	122	110	124	27	19	20	149	129	144	422	18,667	15,419	15,780	49,866	88	87	82
1999	120	117	124	30	23	19	150	140	143	433	17,287	13,885	14,056	45,228	87	85	83
2000	125	121	116	31	24	18	156	145	134	435	17,311	14,576	13,286	45,173	89	86	83
2001	125	117	117	28	20	17	153	137	134	424	16,756	14,286	13,304	44,346	90	88	82

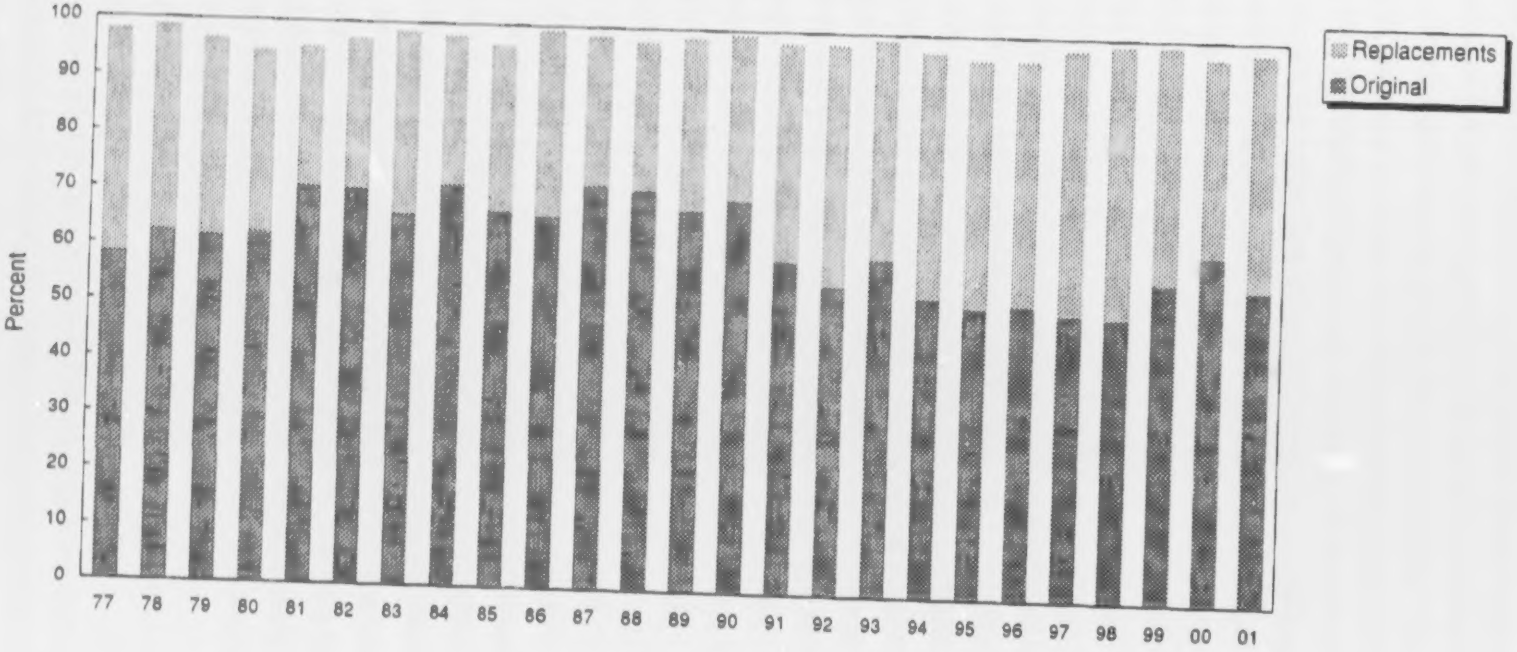
SOURCE: The Monitoring the Future Study, the University of Michigan.

FIGURE 3-1
Schools Included in One Year's Data Collection
Eighth, Tenth and Twelfth Grades



Note: One dot equals one school.

FIGURE 3-2
School Response Rates



	77	78	79	80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	97	98	99	00	01
Original	59	63	62	63	71	71	66	72	67	66	72	71	68	70	59	55	60	53	52	53	51	51	57	62	56
Replacements	39	36	35	32	25	26	32	26	29	33	26	26	30	29	39	43	39	44	44	43	47	48	42	35	42
Total	98	99	97	95	96	97	99	98	96	99	99	98	99	99	98	98	99	97	96	96	98	99	99	97	98

Chapter 4

PREVALENCE OF DRUG USE AMONG EIGHTH-, TENTH-, AND TWELFTH-GRADE STUDENTS

In this chapter both prevalence and frequency of use data for the year 2001 are presented on a wide array of both licit and illicit drugs. Estimates are given for each drug on (a) lifetime use, (b) use in the past 12 months, and (c) use in the prior 30 days. The prevalence of current daily use also is provided, as are the prevalence and frequency of having five or more drinks in a row. For cigarettes, the rate of smoking a half-pack or more per day is included, in addition to a measure of daily smoking.

Later in the chapter, prevalence estimates are given for key *subgroups* in the population based on six cross-break dimensions: gender, college plans, region of the country, population density (or urbanicity), socioeconomic status (as measured by the average educational level of the parents), and racial/ethnic identification. These estimates are provided separately for each of the three grade levels covered in this research—grades 8, 10, and 12.

It should be noted that all of the prevalence statistics given in this section are based on students in attendance on the day of the survey administration. Selected prevalence rate estimates for twelfth-grade students, reflecting adjustments for the missing absentees, as well as for dropouts, may be found in Appendix A to this report (18% of twelfth graders were absent on the day of the survey in 2001). (The adjustments turn out not to be particularly large, and to have virtually no effect on trend estimates.) For eighth and tenth graders, the adjustments for absenteeism and dropping out would be much smaller than those given in Appendix A for twelfth graders, because eighth and tenth graders have considerably lower rates of absenteeism (10% and 12%, respectively, in 2001) and far lower rates of dropping out.

PREVALENCE AND FREQUENCY OF DRUG USE IN 2001: ALL STUDENTS

Prevalence of Lifetime, Annual, and 30-Day Use

A number of tables and figures, upon which the following discussion is based, are provided at the end of this chapter. *Prevalence of use* estimates are provided in Tables 4-1a through 4-1d, respectively, for lifetime, past 12-month, past 30-day, and current daily use. These tables also include the 95% confidence intervals around each estimate, which means that if samples of this size and type were drawn repeatedly from all students at that grade level in the coterminous United States, they would be expected to generate observed prevalence rates that fell within the confidence interval 95 times out of 100. The confidence intervals take into account the effects of sample stratification, the clustering of the sample in schools, and unequal weighting. Of course, the single best estimate that we can make is the value actually observed in our sample—our point estimate.

Table 4-2 brings together on a single page, to facilitate comparisons, the point estimates for all four prevalence periods.

Table 4-3 gives a more detailed breakdown for ***heroin*** by the mode of administration, differentiating use with and without a needle.

Table 4-4a provides data on *frequency* of use for lifetime, 12-month, and 30-day periods.

Table 4-4b provides additional frequency of use estimates for alcohol, cigarettes, and smokeless tobacco.

- More than half of all seniors (54%) reported ***any illicit drug use*** at some time in their lives (see Table 4-2). Some 46% of tenth graders and 27% of eighth graders said they have used an illicit drug at some time.[25]

- Of all the students in each grade reporting some illicit drug use in their lifetime, just under half reported using ***only marijuana***: 45% of all eighth-grade users of any illicit drug (or 12% of the total eighth-grade sample), 49% of all tenth-grade users of any illicit drug (or 22% of the total tenth-grade sample), and 47% of the twelfth-grade users of any illicit drug (or 25% of the total twelfth-grade sample). Put another way, more than half of those students at each grade level who have ever used an illicit drug have used something in addition to (or other than) marijuana.

- When inhalants are also included in the index of illicit drug use, the proportions categorized as having ever used an illicit drug rise, especially for eighth graders. The percentages using ***any illicit drug including inhalants*** in their lifetime are 35% for eighth graders, 49% for tenth graders, and 56% for twelfth graders.

- ***Marijuana*** is by far the most widely used illicit drug. Half of all seniors (49%) reported some marijuana use in their lifetime, 37% reported some use in the past year, and 22% reported some use in the past month. Among tenth graders, the corresponding rates are 40%, 33%, and 20%, respectively. Even among eighth-grade students, marijuana has been used by one in five (20%), with 15% reporting use in the prior year and 9% use in the prior month. Current ***daily marijuana use*** (defined as use on 20 or more occasions in the past 30 days) is also noteworthy. One in 17 twelfth graders (5.8%) uses marijuana daily, as do one in 22 tenth graders (4.5%) and about one in 77 eighth graders (1.3%).

- ***Inhalants*** have become an important class of drugs, showing the second highest lifetime prevalence of use rate among eighth graders, and the third highest among tenth and twelfth graders of any of the illicit drugs used, with lifetime prevalence rates of 17%, 15%, and 13%, respectively. However, in terms of any use in the past 30 days (current use), inhalants rank lower in the upper grade levels because many who had used them at a younger age have discontinued use.

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[25] For twelfth graders, use of "other illicit drugs" includes any use of hallucinogens, cocaine, or heroin *and/or* any use of other narcotics, amphetamines, barbiturates, methaqualone (excluded since 1990), or tranquilizers that is not under a doctor's orders. For eighth and tenth graders the list of drugs is the same except that the use of other narcotics and barbiturates has been excluded both from the illicit drug indexes and from separate presentation in this volume. Questions on these drugs were included in the questionnaires given to eighth and tenth graders, but the results led us to believe that some respondents were including nonprescription drugs in their answers, resulting in exaggerated prevalence of use rates.

- ***Amyl and butyl nitrites***, a specific class of inhalants, have been tried by 1.9% of 2001 seniors. These inhalants have been sold legally in the past and have gone by such street names as "poppers" or "snappers" and such brand names as Locker Room and Rush. When questions specifically about nitrite use were included for the first time in one 1979 senior questionnaire form, we discovered that some users of amyl and butyl nitrites did not report themselves as inhalant users, although they should have. We were able to make estimates of the degree to which inhalant use was being underreported. As a result, we introduced ***inhalants adjusted*** prevalence estimates, which correct for the under-inclusion of nitrite use. Such correction has made very little difference in recent years because of the low rates of nitrite use.[26]

- For eighth graders, inhalant use is followed closely in the rankings by ***amphetamines***, with a lifetime prevalence of use rate of 10%.[27] But amphetamine use comes ahead of inhalant use in the rankings for tenth and twelfth graders, with 16% reporting some use in their lifetime. (Considerably lower prevalence rates are found for the specific class ***methamphetamine***, with 4%, 6%, and 7%, of eighth, tenth, and twelfth graders reporting any lifetime use. Lower still is the use of ***crystal methamphetamine ("ice")*** which has a lifetime prevalence of 4% among twelfth graders; use is not asked in the lower grades.)

- ***Hallucinogens*** are the next most widely used class of substances. Lifetime prevalence of use is 4.0% for eighth graders, 7.8% for tenth graders, and 12.8% for twelfth graders. Until this year, hallucinogen prevalence rates rank this high primarily due to the prevalence of ***LSD*** use (3.4%, 6.3%, and 10.9%, respectively, for the three grade levels).

- Another drug used for its somewhat hallucinogenic properties is ***ecstasy (MDMA)***. At present the lifetime prevalence rates for this drug stand at 5.2%, 8.0%, and 11.7% in grades 8, 10, and 12—rates that are now higher than LSD and cocaine in all three grades.

- When specific questions about ***PCP*** use were added, in 1979, we discovered that some users of PCP did not report themselves as users of hallucinogens, even though PCP is explicitly included as an example in the questions about hallucinogens. Thus, from 1979 onward, we have included the ***hallucinogens adjusted*** prevalence and trend estimates for seniors to correct for this known underreporting. Again, such correction has made very little difference in recent years among seniors, because the rate of PCP use is so low. (See previous footnote.)

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[26] Because the data to adjust inhalant and hallucinogen use for seniors are available from only a single questionnaire form in a given year, the original uncorrected variables will be used in most relational analyses. We believe relational analyses will be least affected by these underestimates and that the most serious impact is on prevalence estimates, which have been adjusted appropriately. Today, the very low levels of use for nitrites and PCP—the two drugs that were used to adjust the estimates for inhalants and hallucinogens, respectively—are so low that these adjustments are hardly relevant any longer. Therefore, questions about their use were not even included in the eighth- and tenth-grade questionnaires.

[27] For findings on the specific amphetamine drugs, including *ritalin*, see Appendix E.

- Lifetime prevalence of use among seniors for the specific hallucinogenic drug ***PCP*** now stands at 3.5%, substantially lower than the lifetime prevalence of the other most widely used hallucinogens, ***LSD*** (10.9%) and ***ecstasy*** (11.7%).

- Lifetime prevalence rates for ***cocaine*** use by eighth, tenth, and twelfth graders are 4.3%, 5.7%, and 8.2%, respectively.

- ***Crack***, a form of cocaine that comes in small chunks or "rocks," can be smoked to produce a rapid and intense high. It currently has a relatively low lifetime prevalence of use rate in all grade levels: 3.0% for eighth graders, 3.1% for tenth graders, and 3.7% for twelfth graders.

  Of all students reporting *any* cocaine use, a significant proportion have some experience with crack: two-thirds of the eighth-grade cocaine users (70%), one-half of the tenth-grade users (54%), and nearly one-half of the twelfth-grade users (45%) reported using crack.

- ***Heroin*** is one of the least commonly used of the illicit drugs for each grade level. Lifetime use is 1.8% for twelfth graders and 1.7% for both tenth and eighth graders. For many years the heroin available in the United States had such a low purity that the only practical way to use it was by injection, usually intravenously. However, due to high production at the world level, purity rose substantially and, as a result, smoking and snorting became more common modes of use. Because of these changes, in 1995 we added separate questions on taking heroin with and without a needle. We found that significant proportions of those reporting *any* heroin use in the previous 12 months indicated using ***heroin without a needle***. In 2001 this was true of more than a third (35%) of the eighth-grade heroin users (0.6% out of the 1.7% indicating any use), nearly one-half (47%) of the tenth-grade users (0.8% out of 1.7%), and two-thirds of the twelfth-grade users (1.2% out of 1.8%). In addition, roughly half of the remaining users of heroin in each grade reported use *both* with and without a needle (see Table 4-3 for more detail on heroin use by mode of administration).

- ***Other narcotics*** are in the top third of the ranking for seniors (9.9% lifetime prevalence). (Data for eighth and tenth graders are not reported for other narcotics because the data are of questionable validity.)

- ***Tranquilizers*** fall in the middle of the prevalence rankings of illicit drugs, with lifetime prevalence rates of 4.7%, 8.1%, and 9.2% for grades 8, 10, and 12, respectively.

- Within the general class of sedatives, the specific drug ***methaqualone*** is used by many fewer seniors (1.1% lifetime prevalence of use) than the much broader subclass of sedatives, ***barbiturates*** (8.7% lifetime prevalence of use). Because methaqualone use has become so limited, questions about its use have not been included in the eighth- and tenth-grade questionnaires. Barbiturate use questions have been included in the grade 8 and 10 questionnaires, but the results are not reported because we suspect that the younger respondents include the use of drugs that are not barbiturates.

- The illicit drug classes remain in roughly the same order whether ranked by lifetime, annual, or monthly prevalence of use, as the data in Figure 4-1 illustrate. The only important change in ranking occurs for ***inhalant*** use among the tenth and twelfth graders, for whom inhalants rank lower in terms of *current* use than is true for lifetime use, because use of a number of the inhalants, such as glues and aerosols, tends to be discontinued at a relatively early age. Among the eighth graders, however, it should be noted that nearly one in ten (9.1%) sniffed or "huffed" some inhalant in the prior 12 months, and one in twenty-five (4.0%) did so in just the 30-day interval preceding the survey.

- Two of the newer drugs reported to be on the scene were included in the 2000 survey for the first time, ***GHB*** and ***ketamine***. Because we are never sure how widespread the use of such new drugs is going to be, we have developed a measurement approach that begins with what we call a single "tripwire" question, which asks *only* about the frequency of use in the last twelve months. The purpose of such a question is to determine whether the drug is making sufficient inroads to justify the larger allocation of questionnaire space given to most of the other drugs.

  Neither of these drugs turned out to have particularly high annual prevalence rates. (See Table 4-6.) In 2001, ***GHB***, which stands for gamma-hydroxybutyrate (a central nervous system depressant) and goes by such street names as "grievous bodily harm" and "G," had annual prevalence rates of 1.1%, 1.0%, and 1.6% in grades 8, 10, and 12, respectively. It is known as a "date rape" drug, because of its ability to induce amnesia of events that occurred while under the influence. There has been considerable adverse publicity in the media about this drug in the past year or so, which may explain the limited rates of use.

- ***Ketamine***, also known as "***special K***" and "***K***," had only slightly higher annual prevalence rates: 1.3%, 2.1%, and 2.5%, respectively, for grades 8, 10, and 12. It is an anesthetic used mostly in veterinary medicine; and it can induce dream-like states and hallucinations.

- Use of either of the two major licit drugs, ***alcohol*** and ***cigarettes***, remains more widespread than use of any of the illicit drugs. Four out of every five students (80%) have at least tried ***alcohol*** by twelfth grade, and half of all twelfth graders (50%) reported using alcohol in the month prior to the survey (Table 4-2). Even among eighth graders, the number of students who reported some alcohol use in their lifetime is high: half (51%) said they have tried alcohol and almost a quarter (22%) are current (past 30 days) drinkers.[28]

- Of greater concern than just any use of alcohol is its use to the point of inebriation: 23% of the eighth graders, 48% of the tenth graders, and 64% of the twelfth graders said they have ***been drunk*** at least once in their lifetime. The prevalence rates of self-reported drunkenness during the 30 days immediately preceding the survey are strikingly high—7.7%, 22%, and 33%, respectively, for grades 8, 10, and 12.

- Another measure of heavy drinking asks respondents to report how many occasions during the previous two-week period they had consumed ***five or more drinks in a row***. Prevalence rates for this behavior are 13%, 25%, and 30% for the three grades, respectively.[29]

- Nearly two-thirds (61%) of seniors reported having tried ***cigarettes*** at some time, and almost one-third (30%) smoked at least some in the prior month. Even among eighth graders, nearly four in every ten (37%) reported having tried cigarettes and 12% smoked in the prior month.

- ***Bidis***, a type of flavored cigarette imported from India, was included in the questionnaires for the first time in 2000, with a single "tripwire" question asking about the frequency of use in the past year. The 2001 proportions using bidis during the past year were not inconsequential—3% in eighth grade, 5% in tenth grade, and 7% in twelfth grade. Presumably, 30-day and daily use would be far lower. ***Kreteks,*** a type of clove cigarette also usually imported, was added in 2001 to the list of "tripwire" questions. Prevalence was found to be fairly similar to bidis, with 3%, 6%, and 10 % reporting use in the past 12 months in eighth, tenth, and twelfth grades, respectively.

- ***Smokeless tobacco*** is used by a surprisingly large number of young people. Among eighth, tenth, and twelfth graders, lifetime prevalence of use rates are 12%, 20%, and 20%, respectively, while current (past 30 days) prevalence of use rates are 4.0%, 6.9%, and 7.8%, respectively. As will be discussed later in this chapter, the rates are considerably higher among boys, who account for most of the use of smokeless, or "spit," tobacco.

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[28] In 1993 the text of the alcohol prevalence of use question was changed slightly in half of the questionnaire forms used at each grade such that the respondent was told explicitly to *exclude* those occasions when the respondent had "just a few sips" of an alcoholic beverage. In 1994 this change was made to the remaining forms. The 2001 data presented here are all based on the revised question. In later tables and graphs in this volume, the 1993 data are presented for both the original question and the revised question. As would be expected, the prevalence of use rates dropped slightly as a result of this methodological change, with the largest shifts observed in the lifetime prevalence of use measures and among the eighth-grade respondents. See Table 2-1 to examine the effects of this change.

[29] We have noted previously that the prevalence of heavy drinking (five or more drinks in a row at least once in the past two weeks) seems inconsistent with eighth-grade students' reported prevalence of getting drunk. In 2001, 13% of eighth graders said they had had five or more drinks in a row at least once in the past two weeks. However, only 8% said they had been drunk or very high from drinking in the past 30 days. It seems unlikely that about one-half of eighth graders who reported having five or more drinks in a row would not have become intoxicated from such an amount. We suspect that they may be overreporting their occasions of heavy drinking, perhaps forgetting what a drink means, even though the questionnaire explicitly tells them that a drink means a bottle of beer, a glass of wine, a wine cooler, a shot of liquor, or a mixed drink. We believe that of the two measures, the reports of getting drunk or very high are likely to be the more accurate for eighth graders, at least.

- Questions about ***anabolic steroids*** were added to the study in 1989. These drugs bear some resemblance to a number of other drugs in the study in that their distribution and sale are legally controlled (with some important exceptions) and, like those other drugs, they often find their way into an illicit market. They also carry a particular danger for HIV transmission since they are often taken by injection. However, they differ from all the other drugs discussed here in one important way: they are not usually taken for their direct psychoactive effects (although they may have some) but rather for their enhancement of the user's musculature and for healing physical injuries. Clearly their potential unintended consequences, including the transmission of HIV, make their illicit use a public health concern. It is for these reasons that they were added to the study.

  The overall prevalence rates for anabolic steroids are modest. For eighth, tenth, and twelfth graders, lifetime prevalence rates are 2.8%, 3.5%, and 3.7%, respectively, while current (past 30 days) prevalence of use rates are 0.7%, 0.9%, and 1.3%, respectively. Annual prevalence rates are 1.6%, 2.1% and 2.4%. However, the annual prevalence rates for males are distinctly higher at 2.3%, 3.3%, and 3.8%, respectively, compared to 1.0%, 1.0%, and 1.1% for females.

- Another closely related class of substance is ***androstenedione,*** which is a precursor to anabolic steroids and which is used for much the same purpose—to enhance strength and physique. It is different in that it is currently legal to purchase over the counter. Concern grew about its use by adolescents when their reported use of anabolic steroids increased sharply in 1999, a year marked by press reports of its use by professional athletes. A single "tripwire" question was added in 2001 to determine how widespread the use of this class of drug actually is, partly in order to check whether some of the increase in reported steroid use actually was due to androstenedione use. The 2001 annual prevalence rates were found to be 1.1%, 2.2%, and 3.0% in eighth, tenth, and twelfth grades, respectively—somewhat lower than for steroids but by no means insignificant. (As with steroids, the annual prevalence rates are considerably higher among males; in this case, they are 1.3%, 3.5%, and 5.3%. In the questionnaire forms containing both drugs, we find that a significant minority of those students reporting anabolic steroid use in 2001 also reported using androstenedione in the later tripwire question specifically about androstenedione: 26%, 28%, and 41% in grades 8,10, and 12, respectively. Therefore, it is possible that some of the reported steroid use is, in fact, androstenedione use and that some of the increase in reported steroid use in the late 1990s was indeed due to increasing use of androstenedione.[30]

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[30] Looked at the the other way around, the proportion of those who reported any androstenedione use in the prior twelve months who *also* reported any steroid use in the same interval is 35%, 28%, and 30% for eighth, tenth, and twelfth graders, respectively. Put another way, roughly between a quarter and a third of androstenedione users are also reporting steroid use, which sets outer limits on the degree to which these two questions are double-counting the same behaviors.

- Another physique-enhancing substance is ***creatine,*** though it is not a drug at all, but rather a type of protein supplement that is supposed to help build muscle mass. Because we thought that a number of boys were probably using this substance along with steroids and/or androstenedione, we added a tripwire question about its use in 2001. It turns out that we were correct; in fact the use of creatine, which is sold over the counter, was even more widespread than we expected, and this is troublesome, given the limited research knowledge about the long-term effects of using this substance. We determined that the proportion of boys reporting use of creatine in the past twelve months was 4.8%, 14.7%, and 22.1% in grades eight, ten, and twelve. Many fewer girls report use—0.9%, 1.7%, and 2.0%, respectively.

Frequency of Lifetime, Annual, and 30-Day Use

While most of the discussion in this volume focuses on prevalence of use rates for different time periods (i.e., lifetime, annual, and 30-day), some readers may be interested in more detailed information about the frequency with which various drugs have been used in these same time periods. Tables 4-4a and 4-4b present frequency-of-use information in the full detail contained in the original question-and-answer sets.

Prevalence of Current Daily Use

Frequent use of illicit or licit drugs is a great concern for the health and safety of adolescents. Table 4-2 (and Table 5-4 in Chapter 5) and Figure 4-2 show the prevalence of current daily or near-daily use of the various classes of drugs. For all drugs, except cigarettes and smokeless tobacco, respondents are considered current daily users if they indicated that they had used the drug on 20 or more occasions in the preceding 30 days. Respondents are considered daily users of cigarettes if they explicitly stated the use of one or more cigarettes per day and users of smokeless tobacco if they stated using "about once a day" or more often.

- Across all three grade levels, there are more current daily users of ***cigarettes*** than of any of the other drug classes: 5.5%, 12%, and 19% in grades 8, 10, and 12, respectively, in 2001. Many of these daily smokers say they currently smoke a half-pack or more per day (2.3%, 5.5%, and 10.3% of all respondents in grades 8, 10, and 12, respectively).

- Daily use of ***smokeless tobacco*** is considerably lower than daily use of cigarettes, at 1.2%, 2.2%, and 2.8%, respectively. The rates among boys are quite a bit higher, however, as is discussed later in a section on gender differences in use rates.

- The proportions of students who consume ***tobacco*** daily in either or both forms (i.e., as cigarettes and/or smokeless tobacco) are only slightly higher than the prevalence of use rates for cigarettes alone. This is because there are relatively few daily users of smokeless tobacco, as just noted, but also because two-thirds of the daily smokeless users did not use cigarettes on a daily basis.

- For many years ***alcohol*** was the next most frequently used drug on a daily basis at all three grade levels, but because daily marijuana use rose substantially in the 1990s, it now exceeds daily alcohol use. The daily alcohol use rates in 2001 were 0.9%, 1.9%, and 3.6% in grades 8, 10, and 12, respectively.

- ***Marijuana*** is now used on a daily or near-daily basis by 1 of every 17 seniors (6%); somewhat fewer tenth-grade and considerably fewer eighth-grade students use it daily (4.5% and 1.3%, respectively). (See Chapter 10 for information on levels of past daily use and cumulative daily use of marijuana.)

- Less than 1% of the twelfth-grade respondents reported daily use of any one of the illicit drugs other than marijuana. Only 0.5% reported daily use of ***amphetamines***, followed by 0.3% or fewer using a number of drug classes (see Table 5-4). While very low, these figures are not inconsequential because 1% of the high school class of 2001 represents roughly 35,000 individuals nationwide.

NONCONTINUATION RATES

One indication of the proportion of people who try a drug but do not continue to use it can be derived from calculating the percentage of those who ever used a drug (once or more) who did *not* use it in the 12 months preceding the survey.[31] We use the word "noncontinuation" to describe this operational definition, rather than "discontinuation," because the latter might imply discontinuing an established pattern of use, whereas our current operational definition includes noncontinuation by experimental users as well as established users. Figure 4-3 provides these noncontinuation rates for all drug classes for all grades in 2001. This figure shows that noncontinuation rates vary widely among the different drugs.

- Among twelfth graders the highest noncontinuation rates are observed for ***nitrite inhalants*** (68%). ***Inhalants*** follow closely (at 65%); since many inhalants are used primarily at a younger age, use is often not continued into the senior year. After inhalants, the rank ordering for noncontinuation rates is as follows: ***heroin with a needle*** (57%); ***heroin in general*** (50%); ***PCP*** (48%); ***Rohypnol*** (47%); ***heroin without a needle*** (47%); ***methamphetamine*** (44%); ***crack cocaine*** (44%); ***cocaine in general*** (42%); ***other cocaine*** (41%); ***LSD*** and ***crystal methamphetamine*** (both 39%); ***hallucinogens other than LSD*** (37%); ***steroids and barbiturates*** (both 35%); ***hallucinogens in general*** (34%); ***amphetamines*** (33%), ***narcotics other than heroin*** (32%); ***tranquilizers*** (29%); ***methaqualone*** (27%); ***marijuana*** (25%), and ***MDMA*** or "***ecstasy***" (21%). Ecstasy very likely has one of the lowest non-continuation rates at present because it has become more popular very recently, particularly among the older teens.

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[31] This operationalization of noncontinuation has an inherent problem in that users of a given drug who initiated use during the past year by definition cannot be noncontinuers. Thus, the definition tends to understate the noncontinuation rate, particularly for drug use that tends to be initiated late in high school rather than in earlier years.

- Because a relatively high proportion of users continues to use ***marijuana*** at some level over an extended period, it consistently has had one of the lowest noncontinuation rates in senior year of any of the illicit drugs (25% in 2001).
- It is noteworthy that of all the seniors who have ever used ***crack*** (3.7%), only one-third (1.1%) are current users and only 0.1% of the total sample are current daily users. While there is no question that crack is highly addictive, the evidence from this study has consistently suggested that it is not usually addictive on the first use, as was sometimes alleged.
- In contrast to illicit drugs, noncontinuation rates for the two licit drugs are extremely low. ***Alcohol***, tried by the great majority of seniors (80%), is still used in the senior year by nearly all who have ever tried it (73% of all seniors), yielding a noncontinuation rate for alcohol of only 8%.[32]
- Noncontinuation is defined differently for ***cigarettes***, because respondents are not asked to report on cigarette use in the past year. The noncontinuation rate is thus defined as the percentage of those who say they ever smoked "regularly" who also reported not smoking at all during the past 30 days. Of the seniors who said they were regular smokers, only 18% have ceased active use.
- Noncontinuation is defined for ***smokeless tobacco*** much the same way as for cigarettes. It also has a relatively low rate of noncontinuation by senior year—only 19% of the lifetime "regular" users had not used it in the past 30 days.

PREVALENCE COMPARISONS FOR IMPORTANT SUBGROUPS

The differences in prevalence of use for the various drugs associated with gender, college plans, region of the country, population density, parents' education level, and racial/ethnic identification are presented and discussed next. Tables 4-5 through 4-9 provide the statistics on the usage rates for the various subgroups defined on these dimensions.

Gender Differences

In general, higher proportions of males than females are involved in illicit drug use, especially heavy drug use; however, this picture is a somewhat complicated one (see Tables 4-5 through 4-8).

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[32] Specifically, dividing the 73.30% annual rate by the 79.66% lifetime rate yields a *continuation* rate of 92.2%; the *noncontinuation* rate is thus 8.0%.

- Overall, the proportion of twelfth graders using ***marijuana*** is higher among males (annual prevalence of use is 40%, versus 34% among females), and daily use of marijuana is even more concentrated among males (7.9% versus 3.6% for females). This is also true among eighth- and tenth-grade students (see Tables 4-6 and 4-8).

- Males have considerably higher prevalence of use rates on most other illicit drugs, too. The annual prevalence of use rates in the senior year tend to be at least one and one-half to two times as high among males as among females for ***hallucinogens***, ***hallucinogens other than LSD***, ***heroin***, ***Rohypnol***, ***GHB***, ***Ketamine***, and ***steroids***. Further, males account for an even greater share of the frequent or heavy users of these various classes of drugs. For many of these drugs, there is little gender difference in use among eighth and tenth graders, however. In fact, for some drugs, including ***any illicit drug other than marijuana***, ***inhalants***, ***MDMA***, ***cocaine***, ***crack***, ***amphetamines***, ***methamphetamine***, ***Rohypnol***, and ***tranquilizers***, females have slightly higher rates of annual use in eighth grade. Thus, the gender differences observed in twelfth grade, with males more likely to use many drugs, seem to emerge over the course of middle to late adolescence.

- In twelfth grade, females have an annual prevalence rate for ***amphetamines*** (10.6%) equivalent to that for males (10.9%), and in the earlier grades females actually have higher rates of amphetamine use.

- The proportions of high school seniors who reported using ***some illicit drug other than marijuana*** during the last year are not very different between genders (20% for males versus 18% for females; see Figure 5-7 in Chapter 5). If going beyond marijuana is an important threshold point in the sequence of illicit drug use, then fairly similar proportions of both sexes were willing to cross that threshold at least once during the year. However, on average, female users take fewer types of drugs and tend to use them with less frequency than their male counterparts.

- The use of ***anabolic steroids*** is heavily concentrated among males: twelfth-grade males have an annual prevalence of use rate of 3.8% compared to 1.1% among females. In eighth grade, the difference is 2.3% versus 1.0%, respectively.

- Frequent use of ***alcohol*** also tends to be disproportionately concentrated among males. ***Daily use***, for example, is reported by 5.5% of the twelfth-grade males versus only 1.7% of the twelfth-grade females. Males are more likely than females to drink large quantities of alcohol in a single sitting: 36% of twelfth-grade males reported drinking ***five or more drinks in a row*** in the prior two weeks versus 24% of twelfth-grade females.[33] These gender differences are observable at all three grade levels, but they become considerably larger at the higher grade levels.

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[33] Because females tend to weigh less than males, and may metabolize alcohol somewhat differently, a given quantity of ingested alcohol would, on average, lead to higher blood alcohol concentrations for females, compared to males. Therefore, the difference in terms of a fixed number of drinks, such as five or more drinks, may not reflect the difference in intoxication rates. The difference in self-reported 30-day prevalence of drunkenness among seniors is 9% (37% for males versus 28% for females), which is three quarters of the 12% gender difference in having five or more drinks in a row (36% versus 24%).

- In recent years, ***smoking rates*** among seniors have been similar for males and females. In 2001, twelfth-grade males and females reported almost equal rates of ***smoking daily*** in the past month (18% for males versus 20% for females) and smoking ***a half-pack or more per day*** (10% for both males and females). In eighth grade, daily smoking rates are also very close for the two genders (5.9% for males versus 4.9% for females), and in tenth grade the rates of daily smoking are the same (12%) for the two genders.

- The smoking of ***bidis***, however, tends to be more concentrated among males.

- The use of ***smokeless tobacco*** is almost exclusively a male behavior. Although 14% of the twelfth-grade males reported some use in the prior month, only 1.6% of the females did. Rates of daily use by males are 2.5% among eighth graders, 4.5% among tenth graders, and 5.6% among twelfth graders. The comparable statistics for females are only 0.1%, 0.3%, and 0.3%, respectively.

Differences Related to College Plans

Overall, students who say they probably or definitely will complete four years of college (referred to here as the "college-bound") have lower rates of illicit drug use in secondary school than those who say they probably or definitely will not. (See Tables 4-5 through 4-8 and Figures 5-8 through 5-9 in Chapter 5.)

It is interesting to note that while the great majority of students at all three grade levels expect to complete college (see Table 4-7), the proportion who indicate college plans is higher at the lower grade levels than in the upper grades, despite the fact that the lower grades contain the 15% to 20% of each cohort who eventually will drop out of high school. There likely are cohort shifts in college attendance taking place, as there have been throughout the life of the study, that may partially explain this anomaly; but there also likely is a considerable age effect, as well, wherein early aspirations become reality tested (and adjusted) as secondary school experience cumulates.

For any given drug, the differences between these two self-identified groups of college- or noncollege-bound students tend to be greatest in the eighth grade. This could reflect an earlier age of initiation of drug use for the noncollege-bound and/or the fact that fewer of the eventual dropouts have left school yet, thus increasing the differences in the lower grades.

- Annual ***marijuana*** use is reported by 35% of the college-bound seniors versus 42% of the noncollege-bound, but among eighth graders it is reported by only 13% of the college-bound versus 34% of the noncollege-bound.

- Among 2001 seniors, 17% of the college-bound reported using ***any illicit drug other than marijuana*** in the prior year versus 25% of the noncollege-bound.

- Frequent use of many of these illicit drugs shows even larger contrasts related to college plans (see Table 4-8). ***Daily marijuana*** use among twelfth graders, for example, is twice as high among those who do not plan to attend college (8.8%) as among the college-bound (4.4%). Among eighth graders, it is six times as high, and among tenth graders it is almost four times as high.

- Frequent alcohol use also is considerably more prevalent among the noncollege-bound. For example, ***daily drinking*** is reported by 5.3% of the noncollege-bound seniors versus 2.9% of the college-bound seniors. ***Binge drinking*** (five or more drinks in a row at least once during the preceding two weeks) is reported by 36% of the noncollege-bound seniors versus 28% of the college-bound. There are also modest differences between the noncollege-bound and college-bound seniors in lifetime (84% versus 79%), annual (77% versus 72%), or 30-day (56% versus 48%) prevalence of alcohol use. In the lower grades, there are even larger differences in the various drinking measures between those who say they expect to go to college and those who do not (see Tables 4-6 though 4-8).

- At all three grade levels, more noncollege-bound students use ***steroids*** compared to college-bound students.

- By far, the largest and most dramatic difference in substance use between the college- and noncollege-bound involves ***cigarette*** smoking—8% of the college-bound seniors reported smoking ***a half-pack or more daily*** compared to 19% of the noncollege-bound seniors. The proportional differences are even larger in the lower grades: 1.4% versus 10%, respectively, in eighth grade and 3.8% versus 16% in tenth grade. (The absence of dropouts by twelfth grade undoubtedly reduces the ratio, since dropouts have a particularly high rate of smoking.)

Regional Differences

Some regional differences in the rates of illicit drug use among high school seniors may be observed in Tables 4-5 through 4-8 and Figure 5-10a-c in Chapter 5. See Figure 4-4 for a ***regional division*** map showing the states included in the four regions of the country as defined by the Census Bureau. The states in each region are also listed in Appendix B.

- In 2001, the overall rates of ***any illicit drug*** use differed some among the regions. The highest rate was in the Northeast, where 47% of seniors said they had used an ***illicit drug*** in the past year, followed closely by the West and North Central (42%), and then the South (37%) (see Figure 5-10a in Chapter 5).

- Among twelfth graders, there generally has been little difference in ***marijuana*** use among the regions, except that use in the South typically has been lower than in the other three regions. That remains generally true this year, except that the Northeast (at 44%) shows a somewhat higher prevalence than the West (at 38%) and North Central (at 37%).

- At present, the regional variation in terms of the percentage of seniors using some ***illicit drug other than marijuana*** in the past year shows the Northeast and West having the highest rate of use (22%), with the South (at 19%) and the North Central (at 18%) being lower.

- In the past, there consistently was a large regional difference in the use of ***ice***, or crystal methamphetamine, with the West having the highest rate. The highest rate in 2001 among seniors was still in the West, with 4.7% annual prevalence of use, followed by the North Central (2.1%), the Northeast (1.9%), and the South (1.7%).

- In the past, the largest observed regional differences have been in ***cocaine*** use, and the West has tended to have the highest level of use. Regional differences in recent years are much smaller. The West has the highest **crack** use rates for tenth and twelfth grades, but there is little regional difference at eighth grade.

- The South has had the highest rate of ***tranquilizer*** use at all three grades for some years (though its rate is not the highest at twelfth grade in 2001). The South has the highest rate of ***barbiturate*** use in twelfth grade (the only grade for which it is reported).

- ***Rohypnol*** which, like tranquilizers and barbiturates, is a central nervous system depressant, does not show regional differences that are at all consistent across grades.

- The use of ***ecstasy*** is currently lower in the South than in the other three regions among twelfth graders, with small regional differences in grade 8 and 10.

- For some years, the annual prevalence rates of ***alcohol*** use among seniors have been somewhat lower in the South and West than in the Northeast and North Central regions, though there has been little regional difference in the lower grades. This year, the same remains true, although the differences are slight.

- ***Crystal methamphetamine*** (***ice***) use among twelfth graders is currently highest in the West (4.7% annual prevalence), with use somewhat lower in the other regions.

- The West continues to have considerably lower rates of ***daily smoking*** than the other regions at all three grade levels, but particularly at the lower grade levels (Table 4-8).

- The use of ***smokeless tobacco***, particularly current daily use, tends to be concentrated in the South and North Central.

Differences Related to Population Density

Three levels of population density (or urbanicity) have been distinguished for analytical purposes: (1) large MSAs, which are the largest Metropolitan Statistical Areas in the 1990 Census; (2) other MSAs, which are the remaining Metropolitan Statistical Areas; and (3) non-MSAs, which are the sampling areas not designated as metropolitan by the Census. (See Appendix B for further details.)

In general, the differences in the use of most illicit drugs across these various-sized communities are small, reflecting how widely illicit drug use has diffused through the population (see Tables 4-5 through 4-8).

- In twelfth grade, annual ***marijuana*** use is a little lower in the non-urban areas (35%) than in the large metropolitan areas (39%) or in the other metropolitan areas (37%).
- On the other hand, at the tenth and twelfth grade levels, ***amphetamine*** use is somewhat higher in non-urban areas than in the metropolitan areas. For eighth grade, the "other MSAs" have the highest rate of amphetamine use.
- In all grades, ***binge drinking*** is highest in the non-metropolitan areas, although the differences are not large (Table 4-8).
- ***Daily cigarette*** use is inversely related to community size at all three grade levels. (See Table 4-8.) The proportional differences are larger at the lower grades; for example, among eighth graders use is about twice as high in the non-urban areas as in the other strata. In 2001 the daily smoking rates for eighth graders were 4.1% in the large cities, 5.4% in the other cities, and 7.2% in the non-metropolitan areas.
- ***Smokeless tobacco*** use also is highest in the non-urban areas at all three grade levels and, again, the differences are large. Current prevalence of use (past 30 days) is two to three times as high in the non-urban areas as in the most urban (e.g., for eighth graders, 30-day prevalence is 2.4% in the large MSAs, 3.5% in the other MSAs, and 7.0% in the non-MSAs). Daily use of smokeless tobacco is even more concentrated in the more rural areas (see Table 4-8). Clearly, the use of smokeless or "spit" tobacco continues to be a largely rural phenomenon, particularly among rural males in the South and North Central regions of the country.
- By way of contrast, the reported use of ***bidis***, the flavored cigarettes from India, tends to be higher in urban areas, though the differences are not large (Table 4-6).

Differences Related to Parental Education

The best measure of family socioeconomic status available in the study is an index of parental education, which is based on the average of the educational levels reported for both parents by the respondent (or on the data for one parent, if data for both are not available). The scale values on the original questions read as follows: (1) completed grade school or less, (2) some high school, (3) completed high school, (4) some college, (5) completed college, and (6) graduate or professional school after college. The respondent is instructed to indicate on this scale the highest level of education each parent attained. (It should be noted that the average educational level obtained by students' parents has been rising over the years.) Tables 4-5 through 4-8 give the distributions for 2001 for each grade level.

- By senior year there is rather little association with family socioeconomic status for the use of ***most drugs***. This again speaks to the extent to which illicit drug use has permeated all social strata in American society.

- However, an examination of Table 4-6 shows that in eighth grade, there tends to be a negative ordinal relationship between socioeconomic level and annual prevalence of use. The relationships are not always entirely ordinal.

  Many of these differences have disappeared by tenth grade or twelfth grade. This is true for ***marijuana***, ***inhalants***, ***hallucinogens***, ***LSD***, and ***tranquilizers*** but *not* for ***cocaine***, ***crack***, or ***heroin***. For these latter drugs the lower strata (or lowest stratum in some cases) generally continue to have the highest proportion of users, even at the upper grade levels.

  The diminished socioeconomic differences by twelfth grade could be explained by the upper- and middle-class teenagers "catching up" with their more precocious peers from poorer backgrounds. But the diminished differences may also be explained by the fact that dropping out of school is correlated both with socioeconomic status (negatively) and with drug use (positively). Thus, the lower strata may have lost more of their drug users to dropping out by the time they reach the upper grades.

- ***Cigarette smoking*** tends to bear a strong inverse relationship with parental education among eighth graders (see Table 4-7), but this relationship attenuates considerably by grade 12. (The attenuation is much less for heavier smoking.)

Racial/Ethnic Differences

Racial/ethnic comparisons for African Americans, Hispanics, and Whites were added to this monograph series for the first time in 1991.[34] Although the design of this project did not include an oversampling of any minority groups, the large overall sample sizes at each grade level do produce fair numbers of African American and Hispanic respondents each year. However, in the findings presented in this volume, we routinely present combined data from two adjacent years to increase the sample sizes on which they are based and, thus, the reliability of the estimates. Otherwise, misleading findings about the size of racial/ethnic differences may emerge as well as, perhaps more importantly, misleading findings about their trends. We caution the reader that the sampling error of differences between groups is likely to be larger than would be true for other demographic and background variables such as gender or college plans, because African Americans and Hispanics are more likely to be clustered by school. Table 4-9 gives the combined 2000-2001 lifetime, annual, 30-day, and selected daily use statistics for the three racial/ethnic groups at all three grade levels, along with the numbers of cases upon which the estimates are based. These percentages all are based on the 2000 and 2001 surveys combined.

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[34] We recognize that the Hispanic category is a broad one, encompassing people with various Latin American, Caribbean, and European origins, but for the purposes of this monograph the sample sizes unfortunately are too small to differentiate among them. For a more complete treatment of racial/ethnic differences, in which additional subgroups are distinguished and males and females are examined separately within each racial/ethnic category, see Bachman, J. G., Wallace, J. M., Jr., O'Malley, P. M., Johnston, L. D., Kurth, C. L., & Neighbors, H. W. (1991). Racial/ethnic differences in smoking, drinking, and illicit drug use among American high school seniors, 1976-1989. *American Journal of Public Health, 81*, 372-377; Wallace, J. M., Jr., Bachman J. G., O'Malley, P. M., Johnston, L. D., Schulenberg, J. S., & Cooper, S. M. (in press). Smoking, drinking and drugs: Racial/ethnic differences among American high school seniors, 1976-2000. *Public Health Reports*.

- Several general points can be derived from Table 4-9. First, for ***all drugs***, licit and illicit, African American seniors reported lifetime, annual, 30-day, and daily prevalence of use rates that are lower—sometimes dramatically lower—than those for White or Hispanic seniors.

  Second, the same can be said for African American students in eighth and tenth grades; therefore, the low usage rates in twelfth grade almost certainly are not due to differential dropout rates. (There are two exceptions: for eighth-grade lifetime marijuana use, White students have lower rates of use than African American students and for tenth-grade lifetime marijuana use, the usage rate is the same for White and African American students.)

- The third general point is that by twelfth grade, White students have the highest lifetime and annual prevalence of use rates for many substances, including ***inhalants***, ***LSD***, ***hallucinogens other than LSD***, ***other narcotics***, ***amphetamines***, ***barbiturates***, ***methaqualone***, ***tranquilizers***, ***been drunk***, ***binge drinking***, ***cigarettes***, and ***smokeless tobacco***. Not all of these findings are replicated at lower grade levels, however.

- Hispanics, taken as a group, now have the highest lifetime and annual prevalence of use rates in their senior year for ***MDMA***, ***crack***, ***other cocaine***, ***heroin***, and ***ice***. For ***marijuana*** their lifetime prevalence rate is still highest, but their annual prevalence falls slightly below that of Whites. Their rate of **cocaine** use has tended to be particularly high, compared to the other two racial/ethnic groups, particularly in the lower grades. It should be remembered that Hispanics have a considerably higher dropout rate than Whites or African Americans, based on Census Bureau statistics, and this would tend to diminish any such differences by senior year.

- An examination of the racial/ethnic comparisons at lower grade levels shows Hispanics having higher rates of use of nearly all the substances on which they have the highest prevalence of use in twelfth grade, as well as of several other drugs. For example, in eighth grade 7.9% of Hispanic students reported ever having used ***ecstasy*** (***MDMA***), compared to 4.3% of White students and 2.0% of African American students. For ***tranquilizers***, the lifetime prevalence of use in eighth grade for Hispanics, Whites, and African Americans is 6.0%, 4.5%, and 1.6%, respectively, and for ***cigarettes***, 42%, 39%, and 36%, respectively. In other words, in eighth grade—

before most dropping out occurs—Hispanics have the highest rates of use of all the substances except ***hallucinogens other than LSD*, *methamphetamines*, *and tranquilizers***; whereas, by twelfth grade, Whites have the highest rates of use of most drugs. Certainly the considerably higher dropout rate among Hispanics could explain this shift, and it may be the most plausible explanation. Another explanation worth considering is that Hispanics may tend to start using drugs at a younger age, but that Whites overtake them at older ages. These explanations are not mutually exclusive, of course, and to some degree both explanations may hold true. A more extensive discussion of possible explanations (including the possibility of differential validity of reporting) for the racial/ethnic differences in reported substance use can be found in Wallace et al. (1995).[35]

- Table 4-9 shows exceptionally large absolute and proportional differences between the three groups in their rates of ***daily cigarette smoking***. Among twelfth graders, Whites have a 24% daily smoking rate, Hispanics 12% (which may be low, in part, because of their higher dropout rate), and African Americans only 8%. In fact, African Americans have dramatically lower smoking rates than Whites or Hispanics at all grade levels.

- African American students have the lowest lifetime, annual, and 30-day prevalence rates for ***alcohol*** use. They also tend to have the lowest rates for self-reports of having been ***drunk***.

- Recent ***binge drinking*** (having 5 or more drinks in a row during the prior two weeks) is also lowest among African Americans at all grade levels—in twelfth grade, 12% versus 35% for Whites and 28% for Hispanics. In eighth grade, Hispanics have the highest rate at 18%, compared to 14% for Whites and 9% for African Americans.

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[35] Wallace, J. M., Jr., Bachman, J. G., O'Malley, P. M., & Johnston, L. D. (1995). Racial/ethnic differences in adolescent drug use: Exploring possible explanations. In G. Botvin, S. Schinke, & M. Orlandi (Eds.), *Drug abuse prevention with multi-ethnic youth* (pp. 59-80). Thousand Oaks, CA: Sage.

TABLE 4-1a

Ninety-Five Percent Confidence Limits: Lifetime Prevalence of Use for Eighth, Tenth, and Twelfth Graders, 2001

(Approx. Ns: 8th grade = 16,200, 10th grade = 14,000, 12th grade = 12,800)

	8th Grade			10th Grade			12th Grade		
	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit
Any Illicit Drug[a]	25.2	26.8	28.5	43.4	45.6	47.9	51.1	53.9	56.7
Any Illicit Drug Other Than Marijuana[a,b,c]	13.1	14.8	16.7	21.0	23.4	25.9	25.6	28.5	31.5
Any Illicit Drug Including Inhalants[a,c]	32.8	34.5	36.3	46.5	48.8	51.1	52.0	56.0	59.9
Marijuana/Hashish	18.9	20.4	21.9	37.9	40.1	42.3	46.1	49.0	51.8
Inhalants[c]	15.8	17.1	18.4	13.9	15.2	16.5	11.3	13.0	14.9
Inhalants, Adjusted[c,d]	—	—	—	—	—	—	12.0	13.8	15.7
Amyl/Butyl Nitrites[e]	—	—	—	—	—	—	1.2	1.9	2.9
Hallucinogens[b,c]	3.0	4.0	5.1	6.3	7.8	9.5	10.9	12.8	14.9
Hallucinogens, Adjusted[c,d]	—	—	—	—	—	—	11.4	13.4	15.6
LSD	2.8	3.4	4.2	5.4	6.3	7.4	9.7	10.9	12.3
Hallucinogens Other Than LSD[b,c]	1.4	1.8	2.4	3.3	4.0	4.8	6.0	7.0	8.1
PCP[e]	—	—	—	—	—	—	2.6	3.5	4.8
MDMA (Ecstasy)[e,f]	4.3	5.2	6.3	6.8	8.0	9.5	9.6	11.7	14.2
Cocaine	3.6	4.3	5.1	4.8	5.7	6.7	7.1	8.2	9.5
Crack	2.6	3.0	3.4	2.7	3.1	3.5	3.3	3.7	4.2
Other Cocaine[g]	2.7	3.3	4.0	4.2	5.0	6.0	6.1	7.4	8.9
Heroin	1.5	1.7	2.0	1.4	1.7	2.0	1.5	1.8	2.2
With a Needle[c]	0.9	1.2	1.4	0.6	0.8	1.0	0.4	0.7	1.0
Without a Needle[c]	0.9	1.1	1.3	1.0	1.3	1.6	1.2	1.5	2.0
Other Narcotics[h]	—	—	—	—	—	—	9.0	9.9	10.8
Amphetamines[h]	9.2	10.2	11.3	14.8	16.0	17.4	14.9	16.2	17.7
Methamphetamine[f,i]	3.7	4.4	5.2	5.5	6.4	7.5	5.9	6.9	8.1
Crystal Meth. (Ice)[i]	—	—	—	—	—	—	3.3	4.1	5.0
Sedatives[h,j]	—	—	—	—	—	—	8.1	8.9	9.8
Barbiturates[h]	—	—	—	—	—	—	7.9	8.7	9.5
Methaqualone[e,h]	—	—	—	—	—	—	0.6	1.1	2.0
Tranquilizers[b,c,h]	3.9	4.7	5.5	7.1	8.1	9.3	8.1	9.2	10.5
Rohypnol[e,k]	0.8	1.1	1.6	1.1	1.5	2.0	1.1	1.7	2.7
Alcohol	48.8	50.5	52.3	68.3	70.1	71.8	78.0	79.7	81.2
Been Drunk[i]	21.9	23.4	24.9	46.3	48.2	50.0	60.5	63.9	67.1
Cigarettes	34.9	36.6	38.3	50.9	52.8	54.7	59.0	61.0	63.0
Smokeless Tobacco[b,e]	10.2	11.7	13.4	17.4	19.5	21.8	16.1	19.7	23.9
Steroids[j]	2.5	2.8	3.2	3.0	3.5	3.9	3.0	3.7	4.6

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] For 12th graders only: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of other narcotics and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] For 8th and 10th graders only: Data based on two of four forms; N is one-half of N indicated.

[c] For 12th graders only: Data based on three of six forms; N is one-half of N indicated.

[d] For 12th graders only: Adjusted for underreporting of certain drugs. See text for details.

[e] For 12th graders only: Data based on one of six forms; N is one-sixth of N indicated.

[f] For 8th and 10th graders only: Data based on one of four forms; N is one-third of N indicated.

[g] For 12th graders only: Data based on four of six forms; N is four-sixths of N indicated.

[h] Only drug use which was not under a doctor's orders is included here.

[i] For 12th graders only: Data based on two of six forms; N is two-sixths of N indicated.

[j] For 12th graders only: Data based on six forms adjusted by one form data.

[k] For 8th and 10th graders only: Data based on two of four forms; N is one-third of N indicated due to changes in the questionnaire forms.

TABLE 4-1b

Ninety-Five Percent Confidence Limits: Annual Prevalence of Use for Eighth, Tenth, and Twelfth Graders, 2001

(Approx. Ns: 8th grade = 16,200, 10th grade = 14,000, 12th grade = 12,800)

	8th Grade			10th Grade			12th Grade		
	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit
Any Illicit Drug[a]	18.2	19.5	20.8	35.2	37.2	39.2	38.7	41.4	44.2
Any Illicit Drug Other Than Marijuana[a,b,c]	8.6	9.9	11.4	15.0	16.8	18.9	17.5	19.8	22.4
Any Illicit Drug Including Inhalants[a,c]	22.5	23.9	25.4	36.7	38.7	40.7	38.8	42.6	46.5
Marijuana/Hashish	14.3	15.4	16.7	30.8	32.7	34.7	34.4	37.0	39.7
Inhalants[c]	8.3	9.1	10.0	5.9	6.6	7.5	3.6	4.5	5.7
Inhalants, Adjusted[c,d]	—	—	—	—	—	—	3.9	4.9	6.0
Amyl/Butyl Nitrites[e]	—	—	—	—	—	—	0.3	0.6	1.2
Hallucinogens[b,c]	1.8	2.5	3.3	4.1	5.2	6.4	7.0	8.4	10.0
Hallucinogens, Adjusted[c,d]	—	—	—	—	—	—	7.6	9.0	10.7
LSD	1.7	2.2	2.7	3.4	4.1	4.9	5.7	6.6	7.6
Hallucinogens Other Than LSD[b,c]	0.8	1.1	1.6	2.2	2.8	3.5	3.7	4.4	5.3
PCP[e]	—	—	—	—	—	—	1.2	1.8	2.6
MDMA (Ecstasy)[e,f]	2.8	3.5	4.4	5.2	6.2	7.4	7.4	9.2	11.4
Cocaine	2.1	2.5	3.1	2.9	3.6	4.3	4.1	4.8	5.7
Crack	1.5	1.7	2.0	1.6	1.8	2.1	1.8	2.1	2.5
Other Cocaine[g]	1.5	1.9	2.4	2.4	3.0	3.7	3.5	4.4	5.5
Heroin	0.8	1.0	1.2	0.8	0.9	1.2	0.7	0.9	1.2
With a Needle[c]	0.6	0.7	0.9	0.3	0.4	0.6	0.2	0.3	0.5
Without a Needle[c]	0.5	0.6	0.8	0.5	0.7	0.9	0.6	0.8	1.2
Other Narcotics[h]	—	—	—	—	—	—	6.1	6.7	7.5
Amphetamines[h]	5.9	6.7	7.5	10.7	11.7	12.8	9.9	10.9	12.0
Methamphetamine[f,i]	2.3	2.8	3.3	3.1	3.7	4.4	3.3	3.9	4.7
Crystal Meth. (Ice)[i]	—	—	—	—	—	—	2.0	2.5	3.1
Sedatives[h,j]	—	—	—	—	—	—	5.3	5.9	6.6
Barbiturates[h]	—	—	—	—	—	—	5.1	5.7	6.4
Methaqualone[e,h]	—	—	—	—	—	—	0.4	0.8	1.4
Tranquilizers[b,c,h]	2.5	3.0	3.7	5.1	5.9	6.9	5.6	6.5	7.6
Rohypnol[e,k]	0.5	0.7	1.0	0.7	1.0	1.4	0.5	0.9	1.6
GHB[c,f]	0.8	1.1	1.5	0.7	1.0	1.4	1.2	1.6	2.1
Ketamine[c,f]	1.0	1.3	1.8	1.6	2.1	2.6	2.0	2.5	3.1
Alcohol	40.2	41.9	43.7	61.7	63.5	65.3	71.5	73.3	75.0
Been Drunk[i]	15.3	16.6	17.9	38.1	39.9	41.8	49.8	53.2	56.6
Cigarettes	—	—	—	—	—	—	—	—	—
Bidis[f,i]	2.1	2.7	3.4	4.0	4.9	6.0	5.9	7.0	8.4
Kreteks[f,i]	2.0	2.6	3.4	5.0	6.0	7.2	8.8	10.1	11.7
Smokeless Tobacco[b,e]	—	—	—	—	—	—	—	—	—
Steroids[i]	1.4	1.6	1.9	1.8	2.1	2.4	1.9	2.4	3.0

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] For 12th graders only: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of other narcotics and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] For 8th and 10th graders only: Data based on two of four forms; N is one-half of N indicated.

[c] For 12th graders only: Data based on three of six forms; N is one-half of N indicated.

[d] For 12th graders only: Adjusted for underreporting of certain drugs. See text for details.

[e] For 12th graders only: Data based on one of six forms; N is one-sixth of N indicated.

[f] For 8th and 10th graders only: Data based on one of four forms; N is one-third of N indicated.

[g] For 12th graders only: Data based on four of six forms; N is four-sixths of N indicated.

[h] Only drug use which was not under a doctor's orders is included here.

[i] For 12th graders only: Data based on two of six forms; N is two-sixths of N indicated.

[j] For 12th graders only: Data based on six forms adjusted by one form data.

[k] For 8th and 10th graders only: Data based on two of four forms; N is one-third of N indicated due to changes in the questionnaire forms.

TABLE 4-1c

Ninety-Five Percent Confidence Limits: Thirty-Day Prevalence of Use for Eighth, Tenth, and Twelfth Graders, 2001

(Approx. Ns: 8th grade = 16,200, 10th grade = 14,000, 12th grade = 12,800)

	8th Grade			10th Grade			12th Grade		
	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit
Any Illicit Drug[a]	10.7	11.7	12.7	21.2	22.7	24.3	23.6	25.7	27.9
Any Illicit Drug Other Than Marijuana[a,b,c]	4.7	5.5	6.5	7.5	8.7	10.0	9.3	10.8	12.6
Any Illicit Drug Including Inhalants[a,c]	13.0	14.0	15.2	22.1	23.6	25.2	23.5	26.5	29.6
Marijuana/Hashish	8.3	9.2	10.2	18.4	19.8	21.2	20.4	22.4	24.5
Inhalants[c]	3.5	4.0	4.5	2.1	2.4	2.9	1.2	1.7	2.2
Inhalants, Adjusted[c,d]	—	—	—	—	—	—	1.6	2.1	2.7
Amyl/Butyl Nitrites[e]	—	—	—	—	—	—	0.2	0.5	1.0
Hallucinogens[b,c]	0.9	1.2	1.7	1.6	2.1	2.8	2.5	3.2	4.0
Hallucinogens, Adjusted[c,d]	—	—	—	—	—	—	2.7	3.4	4.3
LSD	0.7	1.0	1.3	1.1	1.5	1.8	1.8	2.3	2.8
Hallucinogens Other Than LSD[b,c]	0.5	0.6	0.9	0.8	1.1	1.4	1.4	1.8	2.2
PCP[e]	—	—	—	—	—	—	0.3	0.5	1.0
MDMA (Ecstasy)[e,f]	1.4	1.8	2.4	2.0	2.6	3.2	2.0	2.8	3.8
Cocaine	0.9	1.2	1.5	1.0	1.3	1.7	1.7	2.1	2.6
Crack	0.6	0.8	0.9	0.6	0.7	0.9	0.9	1.1	1.4
Other Cocaine[g]	0.7	0.9	1.3	0.9	1.2	1.5	1.4	1.8	2.4
Heroin	0.5	0.6	0.8	0.2	0.3	0.5	0.3	0.4	0.6
With a Needle[c]	0.3	0.4	0.5	0.1	0.2	0.3	0.1	0.2	0.4
Without a Needle[c]	0.3	0.4	0.5	0.2	0.2	0.3	0.2	0.3	0.6
Other Narcotics[h]	—	—	—	—	—	—	2.6	3.0	3.4
Amphetamines[h]	2.8	3.2	3.6	5.0	5.6	6.2	5.1	5.6	6.3
Methamphetamine[f,i]	1.0	1.3	1.7	1.1	1.5	2.0	1.2	1.5	2.1
Crystal Meth. (Ice)[i]	—	—	—	—	—	—	0.8	1.1	1.6
Sedatives[h,j]	—	—	—	—	—	—	2.6	3.0	3.4
Barbiturates[h]	—	—	—	—	—	—	2.4	2.8	3.1
Methaqualone[e,h]	—	—	—	—	—	—	0.3	0.5	1.0
Tranquilizers[b,c,h]	1.3	1.6	2.0	2.4	2.9	3.4	2.5	3.0	3.6
Rohypnol[e,k]	0.2	0.4	0.7	0.1	0.2	0.5	0.1	0.3	0.8
Alcohol	20.1	21.5	23.0	37.1	39.0	40.8	47.8	49.8	51.7
Been Drunk[i]	6.8	7.7	8.6	20.4	21.9	23.5	29.6	32.7	36.0
Cigarettes	11.1	12.2	13.4	19.8	21.3	22.9	27.7	29.5	31.3
Smokeless Tobacco[b,e]	3.2	4.0	5.2	5.6	6.9	8.4	5.6	7.8	10.9
Steroids[i]	0.6	0.7	0.9	0.8	0.9	1.2	1.0	1.3	1.8

NOTE: '—' indicates data not available.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] For 12th graders only: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of other narcotics and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] For 8th and 10th graders only: Data based on two of four forms; N is one-half of N indicated.

[c] For 12th graders only: Data based on three of six forms; N is one-half of N indicated.

[d] For 12th graders only: Adjusted for underreporting of certain drugs. See text for details.

[e] For 12th graders only: Data based on one of six forms; N is one-sixth of N indicated.

[f] For 8th and 10th graders only: Data based on one of four forms; N is one-third of N indicated.

[g] For 12th graders only: Data based on four of six forms; N is four-sixths of N indicated.

[h] Only drug use which was not under a doctor's orders is included here.

[i] For 12th graders only: Data based on two of six forms; N is two-sixths of N indicated.

[j] For 12th graders only: Data based on six forms adjusted by one form data.

[k] For 8th and 10th graders only: Data based on two of four forms; N is one-third of N indicated due to changes in the questionnaire forms.

TABLE 4-1d

Ninety-Five Percent Confidence Limits: Daily Prevalence of Use for Eighth, Tenth, and Twelfth Graders, 2001

(Approx. Ns: 8th grade = 16,200, 10th grade = 14,000, 12th grade = 12,800)

	8th Grade			10th Grade			12th Grade		
	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit	Lower limit	Observed estimate	Upper limit
Marijuana/Hashish[a]	1.1	1.3	1.5	4.1	4.5	5.0	5.1	5.8	6.7
Alcohol									
Daily[a]	0.7	0.9	1.1	1.6	1.9	2.1	3.3	3.6	4.0
Been Drunk[b]	0.2	0.2	0.3	0.5	0.6	0.8	1.0	1.4	1.9
5+ Drinks in a Row in Last 2 Weeks	12.1	13.2	14.4	23.3	24.9	26.5	28.0	29.7	31.6
Cigarettes									
Daily	4.7	5.5	6.3	11.0	12.2	13.5	17.5	19.0	20.7
1/2 Pack+/Day	1.9	2.3	2.9	4.8	5.5	6.3	9.3	10.3	11.4
Smokeless Tobacco[c]	0.8	1.2	1.9	1.6	2.2	3.2	1.6	2.8	5.0

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Daily use of marijuana and alcohol is defined as use on twenty or more occasions in the past thirty days.

[b] For 12th graders only: Data based on two of six forms; N is two-sixths of N indicated.

[c] For 8th and 10th graders only: Data based on two of four forms; N is one-half of N indicated. For 12th graders only: Data based on one of six forms; N is one-sixth of N indicated.

TABLE 4-2
Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders, 2001

	Lifetime			Annual			30-Day			Daily		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N =	*16,200*	*14,000*	*12,800*	*16,200*	*14,000*	*12,800*	*16,200*	*14,000*	*12,800*	*16,200*	*14,000*	*12,800*
Any Illicit Drug[a]	26.8	45.6	53.9	19.5	37.2	41.4	11.7	22.7	25.7	—	—	—
Any Illicit Drug Other Than Marijuana[a,b,c]	14.8	23.4	28.5	9.9	16.8	19.8	5.5	8.7	10.8	—	—	—
Any Illicit Drug Including Inhalants[a,c]	34.5	48.8	56.0	23.9	38.7	42.6	14.0	23.6	26.5	—	—	—
Marijuana/Hashish	20.4	40.1	49.0	15.4	32.7	37.0	9.2	19.8	22.4	1.3	4.5	5.8
Inhalants[c]	17.1	15.2	13.0	9.1	6.6	4.5	4.0	2.4	1.7	—	—	0.1
Inhalants, Adjusted[c,d]	—	—	13.8	—	—	4.9	—	—	2.1	—	—	0.1
Amyl/Butyl Nitrites[e]	—	—	1.9	—	—	0.6	—	—	0.5	—	—	0.1
Hallucinogens[b,c]	4.0	7.8	12.8	2.5	5.2	8.4	1.2	2.1	3.2	—	—	0.2
Hallucinogens, Adjusted[c,d]	—	—	13.4	—	—	9.0	—	—	3.4	—	—	0.3
LSD	3.4	6.3	10.9	2.2	4.1	6.6	1.0	1.5	2.3	—	—	0.2
Hallucinogens Other Than LSD[b,c]	1.8	4.0	7.0	1.1	2.8	4.4	0.6	1.1	1.8	—	—	0.1
PCP[e]	—	—	3.5	—	—	1.8	—	—	0.5	—	—	0.1
MDMA (Ecstasy)[e,f]	5.2	8.0	11.7	3.5	6.2	9.2	1.8	2.6	2.8	—	—	0.2
Cocaine	4.3	5.7	8.2	2.5	3.6	4.8	1.2	1.3	2.1	—	—	0.1
Crack	3.0	3.1	3.7	1.7	1.8	2.1	0.8	0.7	1.1	—	—	0.1
Other Cocaine[g]	3.3	5.0	7.4	1.9	3.0	4.4	0.9	1.2	1.8	—	—	0.1
Heroin												
Any Use	1.7	1.7	1.8	1.0	0.9	0.9	0.6	0.3	0.4	—	—	0.1
With a Needle[c]	1.2	0.8	0.7	0.7	0.4	0.3	0.4	0.2	0.2	—	—	*
Without a Needle[c]	1.1	1.3	1.5	0.6	0.7	0.8	0.4	0.2	0.3	—	—	*
Other Narcotics[h]	—	—	9.9	—	—	6.7	—	—	3.0	—	—	0.2
Amphetamines[h]	10.2	16.0	16.2	6.7	11.7	10.9	3.2	5.6	5.6	—	—	0.5
Methamphetamine[i,j]	4.4	6.4	6.9	2.8	3.7	3.9	1.3	1.5	1.5	—	—	0.1
Crystal Meth. (Ice)[j]	—	—	4.1	—	—	2.5	—	—	1.1	—	—	0.2
Sedatives[h,k]	—	—	8.9	—	—	5.9	—	—	3.0	—	—	0.1
Barbiturates[h]	—	—	8.7	—	—	5.7	—	—	2.8	—	—	0.1
Methaqualone[e,h]	—	—	1.1	—	—	0.8	—	—	0.5	—	—	0.0
Tranquilizers[b,c,h]	4.7	8.1	9.2	3.0	5.9	6.5	1.6	2.9	3.0	—	—	*
Rohypnol[e,f]	1.1	1.5	1.7	0.7	1.0	0.9	0.4	0.2	0.3	—	—	*
GHB[c,i]	—	—	—	1.1	1.0	1.6	—	—	—	—	—	—
Ketamine[c,i]	—	—	—	1.3	2.1	2.5	—	—	—	—	—	—
Alcohol												
Any Use	50.5	70.1	79.7	41.9	63.5	73.3	21.5	39.0	49.8	0.9	1.9	3.6
Been Drunk[j]	23.4	48.2	63.9	16.6	39.9	53.2	7.7	21.9	32.7	0.2	0.6	1.4
5+ Drinks in a Row in Last 2 Weeks	—	—	—	—	—	—	—	—	—	13.2	24.9	29.7
Cigarettes												
Any Use	36.6	52.8	61.0	—	—	—	12.2	21.3	29.5	5.5	12.2	19.0
1/2 Pack+/Day	—	—	—	—	—	—	—	—	—	2.3	5.5	10.3
Bidis[i,j]	—	—	—	2.7	4.9	7.0	—	—	—	—	—	—
Kreteks[i,j]	—	—	—	2.6	6.0	10.1	—	—	—	—	—	—
Smokeless Tobacco[b,e]	11.7	19.5	19.7	—	—	—	4.0	6.9	7.8	1.2	2.2	2.8
Steroids[j]	2.8	3.5	3.7	1.6	2.1	2.4	0.7	0.9	1.3	—	—	0.2

NOTES: '—' indicates data not available. '*' indicates less than .05 percent but greater than 0 percent.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] For 12th graders only: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders. For 8th and 10th graders only: The use of other narcotics and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers).

[b] For 8th and 10th graders only: Data based on two of four forms; N is one-half of N indicated.

[c] For 12th graders only: Data based on three of six forms; N is one-half of N indicated.

[d] For 12th graders only: Adjusted for underreporting of certain drugs. See text for details.

[e] For 12th graders only: Data based on one of six forms; N is one-sixth of N indicated.

[f] For 8th and 10th graders only: Data based on two of four forms; N is one-third of N indicated due to changes in the questionnaire forms.

[g] For 12th graders only: Data based on four of six forms; N is four-sixths of N indicated.

[h] Only drug use which was not under a doctor's orders is included here.

[i] For 8th and 10th graders only: Data based on one of four forms; N is one-third of N indicated

[j] For 12th graders only: Data based on two of six forms; N is two-sixths of N indicated.

[k] For 12th graders only: Data based on six forms adjusted by one form data.

TABLE 4-3

Prevalence of Use of Heroin *with* and *without* a Needle for Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages of all respondents)

	Percent who used in:		
	Lifetime	Past year	Past month
Eighth Graders			
Used heroin only without a needle	0.6	0.3	0.2
Used heroin only with a needle	0.6	0.4	0.2
Used heroin both ways	0.5	0.3	0.1
Used heroin at all	1.7	1.0	0.6
Approx. weighted N =	*16,200*	*16,200*	*16,200*
Tenth Graders			
Used heroin only without a needle	0.8	0.5	0.1
Used heroin only with a needle	0.4	0.2	0.1
Used heroin both ways	0.4	0.2	0.1
Used heroin at all	1.7	0.9	0.3
Approx. weighted N =	*14,000*	*14,000*	*14,000*
Twelfth Graders			
Used heroin only without a needle	1.2	0.6	0.2
Used heroin only with a needle	0.3	0.1	0.1
Used heroin both ways	0.4	0.2	0.1
Used heroin at all	1.8	0.9	0.4
Approx. weighted N =	*6,400*	*6,400*	*6,400*

NOTES: Any apparent inconsistency between the total who used heroin at all and the sum of those who used without a needle, with a needle, and both ways is due to rounding error.
Twelfth grade data based on three of six forms.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 4-4a

Frequency of Use of Various Drugs: Lifetime, Annual, and Thirty-Day Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Marijuana			Inhalants[a,b]			Amyl/Butyl[c] Nitrites			Hallucinogens[a,b,d]			LSD			Hallucinogens Other Than LSD[b,d]			PCP[c]			MDMA[c,e]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N =	*16200*	*14000*	*12800*	*16200*	*14000*	*6400*	—	—	*2100*	*8100*	*7000*	*6400*	*16200*	*14000*	*12800*	*8100*	*7000*	*6400*	—	—	*2100*	*5400*	*4700*	*2100*
Lifetime Frequency																								
No occasions	79.6	59.9	51.0	82.9	84.8	87.0	—	—	98.1	96.1	92.2	87.2	96.6	93.7	89.1	98.2	96.0	93.0	—	—	96.5	94.8	92.0	88.3
1-2 occasions	7.0	9.6	10.4	10.4	9.1	7.1	—	—	1.0	2.1	3.6	4.6	2.1	3.6	5.0	0.9	2.1	3.4	—	—	2.7	3.0	4.3	5.0
3-5 occasions	3.2	5.8	6.5	3.1	2.9	2.4	—	—	0.3	0.7	1.9	3.2	0.5	1.0	2.0	0.4	0.9	1.7	—	—	0.2	0.6	1.4	2.7
6-9 occasions	2.2	4.1	4.8	1.5	1.2	1.1	—	—	0.3	0.6	0.8	1.5	0.3	0.7	1.1	0.2	0.4	0.6	—	—	0.3	0.5	0.8	1.0
10-19 occasions	2.1	4.8	5.7	0.9	0.8	1.3	—	—	0.1	0.2	0.9	2.1	0.2	0.5	1.4	0.2	0.3	0.7	—	—	*	0.5	0.7	1.2
20-39 occasions	1.8	4.3	5.3	0.5	0.4	0.5	—	—	0.0	0.2	0.2	0.4	0.2	0.3	0.6	*	0.1	0.2	—	—	0.0	0.2	0.4	0.7
40 or more	4.1	11.5	16.3	0.7	0.7	0.6	—	—	0.2	0.3	0.5	1.1	0.2	0.3	0.9	0.2	0.1	0.4	—	—	0.3	0.4	0.5	1.1
Annual Frequency																								
No occasions	84.6	67.3	63.0	90.9	93.4	95.5	—	—	99.4	97.5	94.9	91.7	97.8	95.9	93.4	98.9	97.2	95.6	—	—	98.2	96.5	93.8	90.8
1-2 occasions	5.6	9.3	10.4	5.8	4.2	2.2	—	—	0.3	1.3	2.4	4.1	1.4	2.5	3.6	0.7	1.8	2.5	—	—	1.1	2.0	3.6	4.7
3-5 occasions	3.0	5.3	5.8	1.6	1.2	1.0	—	—	0.1	0.6	1.5	2.0	0.3	0.7	1.1	0.3	0.4	1.0	—	—	0.3	0.5	1.1	1.8
6-9 occasions	1.8	4.0	4.1	0.7	0.5	0.6	—	—	0.1	0.2	0.5	1.1	0.2	0.4	0.8	0.0	0.3	0.4	—	—	0.1	0.3	0.6	0.9
10-19 occasions	1.7	4.1	4.4	0.5	0.4	0.5	—	—	0.1	0.2	0.4	0.4	0.1	0.2	0.5	0.1	0.2	0.2	—	—	0.1	0.2	0.4	0.8
20-39 occasions	1.4	3.6	3.4	0.3	0.2	0.2	—	—	0.0	0.1	0.3	0.3	0.1	0.1	0.4	*	0.1	0.2	—	—	*	0.3	0.2	0.2
40 or more	1.9	6.6	9.0	0.2	0.2	0.2	—	—	0.1	0.1	0.1	0.4	*	0.1	0.2	0.1	*	0.2	—	—	0.1	0.1	0.2	0.9
30-Day Frequency																								
No occasions	90.8	80.2	77.6	96.0	97.6	98.3	—	—	99.5	98.8	97.9	96.8	99.0	98.6	97.8	99.4	99.0	98.3	—	—	99.5	98.2	97.4	97.2
1-2 occasions	3.9	6.8	7.4	2.6	1.6	0.9	—	—	0.2	0.6	1.4	1.9	0.6	1.1	1.5	0.5	0.7	1.2	—	—	0.2	1.0	1.8	1.5
3-5 occasions	1.7	3.5	3.7	0.7	0.5	0.4	—	—	*	0.3	0.2	0.7	0.1	0.2	0.3	0.1	0.1	0.2	—	—	0.1	0.4	0.4	0.6
6-9 occasions	1.0	2.4	2.8	0.3	0.2	0.2	—	—	*	0.2	0.2	0.2	0.1	0.1	0.3	0.1	0.2	*	—	—	0.1	0.1	0.2	0.4
10-19 occasions	1.3	2.6	2.7	0.2	0.1	0.1	—	—	0.1	*	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	—	—	0.1	0.3	0.2	0.1
20-39 occasions	0.6	2.0	2.4	0.1	0.1	*	—	—	*	0.1	0.0	0.1	*	*	0.1	0.0	0.0	*	—	—	*	*	0.0	0.0
40 or more	0.7	2.5	3.4	0.1	0.1	0.1	—	—	*	*	0.1	0.1	*	0.0	0.1	*	0.0	0.1	—	—	*	*	*	0.2

NOTES: '—' indicates data not available.
'*' indicates less than .05 percent but greater than 0 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 4-4a (cont.)

Frequency of Use of Various Drugs: Lifetime, Annual, and Thirty-Day Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Cocaine			Crack			Other Cocaine[f]			Heroin			Heroin with a Needle[b]			Heroin without a Needle[b]			Other Narcotics			Amphetamines[a,h]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N =	*16200*	*14000*	*12800*	*16200*	*14000*	*12800*	*16200*	*14000*	*8400*	*16200*	*14000*	*12800*	*16200*	*14000*	*6400*	*16200*	*14000*	*6400*	—	—	*12800*	*16200*	*14000*	*12800*
Lifetime Frequency																								
No occasions	95.7	94.3	91.8	97.0	96.9	96.3	96.7	95.0	92.6	98.3	98.3	98.2	98.9	99.2	99.3	98.9	98.7	98.5	—	—	90.1	89.8	84.0	83.8
1-2 occasions	1.9	2.3	3.6	1.9	1.7	1.9	2.1	2.8	3.7	0.8	0.9	1.0	0.6	0.5	0.3	0.6	0.8	1.0	—	—	3.8	5.7	7.0	6.2
3-5 occasions	1.4	1.6	1.7	0.5	0.5	0.6	0.5	0.8	1.1	0.4	0.3	0.3	0.2	0.1	0.1	0.2	0.2	0.2	—	—	2.2	1.8	3.3	2.8
6-9 occasions	0.3	0.4	0.7	0.2	0.3	0.3	0.3	0.5	0.7	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	0.2	—	—	1.3	0.8	2.0	1.9
10-19 occasions	0.4	0.5	0.9	0.1	0.2	0.3	0.1	0.4	0.9	0.2	0.1	0.1	0.1	0.1	0.1	*	*	0.1	—	—	1.1	0.8	1.4	1.8
20-39 occasions	0.1	0.3	0.5	0.1	0.1	0.2	0.2	0.3	0.4	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	*	—	—	0.6	0.4	0.9	1.4
40 or more	0.4	0.5	0.9	0.1	0.2	0.4	0.2	0.3	0.7	0.2	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	—	—	0.9	0.7	1.5	2.2
Annual Frequency																								
No occasions	97.5	96.4	95.2	98.3	98.2	97.9	98.1	97.0	95.6	99.0	99.1	99.1	99.3	99.6	99.7	99.4	99.3	99.2	—	—	93.3	93.3	88.3	89.1
1-2 occasions	1.1	1.6	2.1	1.1	1.0	1.0	1.2	1.8	2.1	0.4	0.5	0.5	0.4	0.2	0.1	0.4	0.5	0.5	—	—	3.1	3.9	5.8	4.2
3-5 occasions	0.8	1.0	1.0	0.3	0.4	0.4	0.3	0.5	0.8	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.2	—	—	1.4	1.2	2.3	2.1
6-9 occasions	0.2	0.3	0.6	0.2	0.1	0.3	0.1	0.3	0.5	0.1	0.1	0.1	0.1	0.1	*	*	*	*	—	—	1.0	0.6	1.4	1.5
10-19 occasions	0.3	0.4	0.5	0.1	0.1	0.2	0.2	0.2	0.4	0.1	*	*	0.1	*	*	*	*	*	—	—	0.6	0.6	1.1	1.4
20-39 occasions	*	0.2	0.3	0.1	0.1	0.2	0.1	0.1	0.3	0.1	0.1	*	0.1	*	*	*	0.1	0.0	—	—	0.4	0.3	0.6	0.9
40 or more	0.2	0.2	0.3	*	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	*	*	*	*	*	0.1	—	—	0.3	0.2	0.6	0.8
30-Day Frequency																								
No occasions	98.8	98.7	97.9	99.2	99.3	98.9	99.1	98.8	98.2	99.4	99.7	99.6	99.6	99.8	99.8	99.7	99.8	99.7	—	—	97.0	96.8	94.4	94.4
1-2 occasions	0.5	0.5	1.0	0.5	0.5	0.6	0.6	0.8	1.1	0.3	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.2	—	—	1.6	1.9	3.2	2.6
3-5 occasions	0.4	0.5	0.7	0.1	0.1	0.3	0.2	0.2	0.4	0.1	0.1	0.1	*	*	0.1	*	*	*	—	—	0.6	0.7	1.1	1.3
6-9 occasions	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.1	*	0.1	*	*	*	*	*	*	—	—	0.3	0.3	0.6	0.7
10-19 occasions	0.1	0.1	0.1	*	*	0.1	*	0.1	0.2	*	*	0.1	*	*	*	*	*	*	—	—	0.3	0.2	0.5	0.4
20-39 occasions	*	*	0.1	0.0	*	*	*	*	*	*	*	0.0	*	0.0	0.0	0.0	0.0	0.0	—	—	0.1	0.1	0.1	0.2
40 or more	0.1	0.1	0.1	*	*	0.1	*	*	*	0.1	*	0.1	*	*	*	*	0.0	*	—	—	0.1	0.1	0.1	0.3

NOTES: '—' indicates data not available.
'*' indicates less than .05 percent but greater than 0 percent.

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 4-4a (cont.)

Frequency of Use of Various Drugs: Lifetime, Annual, and Thirty-Day Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Meth-amphetamine[e,i]			Crystal Meth. (Ice)[i]			Ritalin[e,i]			Barbiturates[h]			Methaqualone[c,h]			Tranquilizers[b,d,h]			Rohypnol[c,d]			GHB[b,e]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N =	*5400*	*4700*	*4200*	—	—	*4200*	*5400*	*4700*	*4200*	—	—	*12800*	—	—	*2100*	*8100*	*7000*	*6400*	*5400*	*4700*	*2100*	*5400*	*4700*	*6400*
Lifetime Frequency																								
No occasions	95.6	93.6	93.1	—	—	96.0	—	—	—	—	—	91.3	—	—	98.9	95.3	91.9	90.8	98.9	98.5	98.3	—	—	—
1-2 occasions	2.5	3.4	2.9	—	—	1.9	—	—	—	—	—	3.5	—	—	0.7	2.5	3.5	4.0	0.5	0.9	1.0	—	—	—
3-5 occasions	0.7	1.2	1.0	—	—	0.8	—	—	—	—	—	1.7	—	—	0.2	1.1	2.0	1.7	0.3	0.3	0.5	—	—	—
6-9 occasions	0.5	0.6	0.7	—	—	0.3	—	—	—	—	—	1.0	—	—	0.1	0.4	0.8	1.2	0.1	0.1	*	—	—	—
10-19 occasions	0.4	0.5	0.6	—	—	0.3	—	—	—	—	—	1.0	—	—	0.1	0.3	0.8	1.1	0.1	0.1	0.1	—	—	—
20-39 occasions	0.1	0.3	0.6	—	—	0.4	—	—	—	—	—	0.7	—	—	0.1	0.3	0.4	0.7	0.1	*	*	—	—	—
40 or more	0.2	0.4	1.1	—	—	0.4	—	—	—	—	—	0.9	—	—	*	0.2	0.6	0.6	*	0.1	0.1	—	—	—
Annual Frequency																								
No occasions	97.2	96.3	96.1	—	—	97.5	97.1	95.2	94.9	—	—	94.3	—	—	99.2	97.0	94.1	93.5	99.3	99.0	99.1	98.9	99.0	98.4
1-2 occasions	1.6	2.0	1.5	—	—	1.1	1.3	2.1	2.5	—	—	2.6	—	—	0.5	1.7	3.0	3.2	0.4	0.8	0.6	0.5	0.4	0.8
3-5 occasions	0.5	0.8	0.7	—	—	0.4	0.7	1.2	0.8	—	—	1.1	—	—	0.3	0.6	1.3	1.5	0.2	0.1	0.2	*	0.3	0.1
6-9 occasions	0.3	0.4	0.6	—	—	0.4	0.3	0.6	0.6	—	—	0.8	—	—	0.0	0.2	0.7	0.8	0.1	0.1	*	0.1	*	0.2
10-19 occasions	0.1	0.2	0.4	—	—	0.3	0.1	0.3	0.5	—	—	0.6	—	—	0.0	0.3	0.7	0.6	*	0.1	0.1	*	*	0.1
20-39 occasions	0.1	0.3	0.4	—	—	0.2	*	0.2	0.2	—	—	0.4	—	—	0.0	0.2	0.1	0.3	0.1	*	0.0	*	0.1	0.1
40 or more	0.1	0.2	0.4	—	—	0.1	0.4	0.5	0.6	—	—	0.3	—	—	*	0.1	0.2	0.1	*	*	0.1	0.4	0.1	0.2
30-Day Frequency																								
No occasions	98.7	98.5	98.5	—	—	98.9	—	—	—	—	—	97.2	—	—	99.5	98.4	97.2	97.0	99.6	99.8	99.7	—	—	—
1-2 occasions	0.7	0.8	0.6	—	—	0.4	—	—	—	—	—	1.5	—	—	0.5	0.9	1.5	1.9	0.3	0.1	0.1	—	—	—
3-5 occasions	0.3	0.2	0.4	—	—	0.4	—	—	—	—	—	0.6	—	—	0.0	0.4	0.8	0.6	*	*	0.1	—	—	—
6-9 occasions	0.1	0.2	0.2	—	—	0.1	—	—	—	—	—	0.3	—	—	*	0.1	0.3	0.3	*	*	0.1	—	—	—
10-19 occasions	*	0.2	0.2	—	—	*	—	—	—	—	—	0.2	—	—	0.0	0.1	0.1	0.1	0.0	*	*	—	—	—
20-39 occasions	*	*	*	—	—	0.2	—	—	—	—	—	0.1	—	—	0.0	0.1	*	*	0.1	0.0	0.0	—	—	—
40 or more	0.1	*	0.1	—	—	*	—	—	—	—	—	*	—	—	0.0	*	*	*	*	0.0	*	—	—	—

NOTES: '—' indicates data not available.
'*' indicates less than .05 percent but greater than 0 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 4-4a (cont.)

Frequency of Use of Various Drugs: Lifetime, Annual, and Thirty-Day Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Ketamine[b,e]			Alcohol			Been Drunk[i]			Bidis[e,i]			Kreteks[e,i]			Steroids[i]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Approx. N =	*5400*	*4700*	*6400*	*16200*	*14000*	*12800*	*16200*	*14000*	*4200*	*5400*	*4700*	*4200*	*5400*	*4700*	*4200*	*16200*	*14000*	*4200*
Lifetime Frequency																		
No occasions	—	—	—	49.5	29.9	20.3	76.6	51.9	36.1	—	—	—	—	—	—	97.2	96.6	96.3
1-2 occasions	—	—	—	13.5	10.6	8.1	12.3	16.8	16.0	—	—	—	—	—	—	1.7	1.8	1.8
3-5 occasions	—	—	—	10.9	12.3	10.5	4.7	9.5	10.0	—	—	—	—	—	—	0.4	0.6	0.7
6-9 occasions	—	—	—	8.0	11.2	9.7	2.2	6.3	7.6	—	—	—	—	—	—	0.3	0.3	0.2
10-19 occasions	—	—	—	7.7	12.7	13.2	1.9	6.4	8.5	—	—	—	—	—	—	0.2	0.3	0.4
20-39 occasions	—	—	—	4.5	9.3	13.1	1.0	4.4	8.9	—	—	—	—	—	—	0.1	0.1	0.2
40 or more	—	—	—	5.9	14.0	25.2	1.4	4.7	12.9	—	—	—	—	—	—	0.2	0.3	0.4
Annual Frequency																		
No occasions	98.7	98.0	97.5	58.1	36.5	26.7	83.4	60.1	46.8	97.3	95.1	93.0	97.4	94.0	89.9	98.4	97.9	97.6
1-2 occasions	0.7	1.2	1.3	18.5	19.0	16.9	10.0	17.8	17.6	1.6	2.5	3.7	1.6	3.0	4.7	1.1	1.1	1.2
3-5 occasions	0.2	0.3	0.4	9.9	14.0	13.6	3.0	8.3	10.1	0.4	0.8	1.0	0.5	1.1	2.2	0.2	0.4	0.5
6-9 occasions	0.2	0.2	0.2	5.8	10.8	11.4	1.6	5.5	6.9	0.2	0.7	0.9	0.2	0.8	1.1	0.1	0.2	0.3
10-19 occasions	*	0.1	0.3	4.0	9.9	12.4	1.1	4.5	7.3	0.2	0.4	0.6	0.1	0.5	1.0	0.1	0.2	0.1
20-39 occasions	0.0	0.1	0.2	2.1	5.5	8.3	0.5	2.1	5.7	0.1	0.2	0.3	0.1	0.2	0.5	*	0.1	0.1
40 or more	0.1	0.1	0.2	1.5	4.4	10.7	0.5	1.7	5.6	0.2	0.3	0.5	0.2	0.4	0.6	0.1	0.1	0.2
30-Day Frequency																		
No occasions	—	—	—	78.5	61.0	50.2	92.4	78.1	67.3	—	—	—	—	—	—	99.3	99.1	98.7
1-2 occasions	—	—	—	12.5	19.8	21.2	5.0	13.4	15.4	—	—	—	—	—	—	0.4	0.5	0.8
3-5 occasions	—	—	—	4.5	9.4	12.2	1.4	4.4	8.2	—	—	—	—	—	—	0.1	0.2	0.2
6-9 occasions	—	—	—	2.5	4.9	7.7	0.7	2.3	4.8	—	—	—	—	—	—	0.1	0.1	*
10-19 occasions	—	—	—	1.1	3.0	5.1	0.3	1.1	2.9	—	—	—	—	—	—	0.1	0.1	0.1
20-39 occasions	—	—	—	0.4	1.0	1.7	0.1	0.4	0.6	—	—	—	—	—	—	*	0.1	0.1
40 or more	—	—	—	0.4	0.9	1.9	0.1	0.3	0.8	—	—	—	—	—	—	*	*	0.1

NOTES: '—' indicates data not available.
'*' indicates less than .05 percent but greater than 0 percent.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Unadjusted for known underreporting of certain drugs. See text for details.
[b] 12th grade only: Data based on three of six forms.
[c] 12th grade only: Data based on one of six forms.
[d] 8th and 10th grades only: Data based on two of four forms.
[e] 8th and 10th grades only: Data based on one of four forms.
[f] 12th grade only: Data based on four of six forms.
[g] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription stimulants.
[h] Only drug use not under a doctor's orders is included here.
[i] 12th grade only: Data based on two of six forms.

TABLE 4-4b

Frequency of Occasions of Heavy Drinking, and Cigarette and Smokeless Tobacco Use Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Percentage who used		
	8th Grade	10th Grade	12th Grade
Q. Think back over the LAST TWO WEEKS. How many times have you had five or more drinks in a row?			
None	86.8	75.1	70.3
Once	5.4	9.3	10.0
Twice	3.3	6.6	7.8
3 to 5 times	2.9	5.7	7.8
6 to 9 times	0.8	1.7	2.5
10 or more times	0.8	1.6	1.8
Approx. N =	*16,200*	*14,000*	*12,800*
Q. Have you ever smoked cigarettes?			
Never	63.4	47.2	39.0
Once or twice	21.4	24.2	23.6
Occasionally but not regularly	7.0	12.4	14.2
Regularly in the past	4.3	6.8	7.6
Regularly now	3.9	9.5	15.6
Approx. N =	*16,200*	*14,000*	*12,800*
Q. How frequently have you smoked cigarettes during the past 30 days?			
Not at all (includes "never" category from question above)	87.8	78.7	70.5
Less than one cigarette per day	6.7	9.1	10.4
One to five cigarettes per day	3.1	6.7	8.7
About one-half pack per day	1.2	3.1	5.5
About one pack per day	0.5	1.8	3.5
About one and one-half packs per day	0.3	0.4	0.7
Two packs or more per day	0.3	0.3	0.5
Approx. N =	*16,200*	*14,000*	*12,800*
Q. Have you ever taken or used smokeless tobacco (snuff, plug, dipping tobacco, chewing tobacco)?			
Never	88.3	80.5	80.3
Once or twice	7.2	11.7	10.8
Occasionally but not regularly	2.5	3.9	4.8
Regularly in the past	1.0	1.4	1.3
Regularly now	1.1	2.4	2.8
Approx. N =	*8,100*	*7,000*	*2100*
Q. How frequently have you taken smokeless tobacco during the past 30 days?			
Not at all (includes "never" category from question above)	96.0	93.1	92.2
Once or twice	1.9	2.9	3.7
Once or twice per week	0.7	1.2	0.8
Three to five times per week	0.2	0.6	0.5
About once a day	0.3	0.5	0.9
More than once a day	0.9	1.7	1.9
Approx. N =	*8,100*	*7,000*	*2100*

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 4-5

Lifetime Prevalence of Use of Various Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Approx. N[a]			Any Illicit Drug			Any Illicit Drug Other Than Marijuana[b,c]			Marijuana			Inhalants[c,d]			Amyl/Butyl Nitrites[e]			Hallucinogens[b,c,d]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	*16,200*	*14,000*	*12,800*	26.8	45.6	53.9	14.8	23.4	28.5	20.4	40.1	49.0	17.1	15.2	13.0	—	—	1.9	4.0	7.8	12.8
Gender:																					
Male	*7,500*	*6,600*	*5,800*	28.8	48.2	56.3	13.9	22.3	28.1	23.6	43.9	51.9	16.5	15.7	15.1	—	—	2.7	4.3	8.9	13.8
Female	*8,300*	*7,100*	*6,500*	24.7	42.9	51.1	15.6	23.8	27.3	17.2	36.4	45.7	17.8	14.7	11.1	—	—	1.1	3.6	6.4	11.2
College Plans:																					
None or under 4 yrs.	*1,600*	*1,900*	*2,500*	46.8	61.9	61.3	27.7	36.8	36.3	40.8	56.7	55.9	25.7	22.7	16.5	—	—	4.7	11.7	16.6	15.6
Complete 4 yrs.	*14,100*	*11,900*	*9,600*	24.4	43.0	51.3	13.5	21.2	25.2	17.9	37.4	46.6	16.3	13.9	12.0	—	—	1.2	3.2	6.2	11.1
Region:																					
Northeast	*2,900*	*2,700*	*2,400*	24.6	43.1	58.8	11.5	17.6	30.2	18.7	38.8	54.9	16.8	13.9	15.5	—	—	4.3	2.8	5.7	17.5
North Central	*4,000*	*4,100*	*3,700*	24.6	43.8	54.2	14.8	22.2	26.8	18.3	38.8	48.2	16.5	14.8	14.5	—	—	0.3	3.3	7.5	12.0
South	*5,900*	*5,000*	*4,100*	29.7	46.1	49.9	17.2	25.7	26.5	22.4	39.6	44.9	18.0	15.4	10.1	—	—	1.7	4.9	7.8	9.7
West	*3,400*	*2,200*	*2,600*	26.2	51.0	55.6	13.3	27.1	32.1	20.7	45.2	51.2	16.3	16.8	13.6	—	—	2.8	4.0	10.5	14.3
Population Density:																					
Large MSA	*4,700*	*3,900*	*3,800*	24.2	41.7	54.4	11.4	18.7	28.2	17.3	36.4	50.1	16.1	14.2	12.1	—	—	1.3	3.5	7.0	14.2
Other MSA	*7,500*	*6,700*	*5,800*	28.4	47.3	54.2	16.8	23.3	28.0	22.3	42.4	49.1	16.8	15.1	12.4	—	—	2.7	4.0	7.5	13.4
Non-MSA	*4,000*	*3,400*	*3,200*	26.8	46.8	52.9	14.9	29.0	29.7	20.3	39.8	47.5	18.7	16.4	15.3	—	—	1.3	4.3	9.2	10.0
Parental Education:[f]																					
1.0-2.0 (Low)	*1,300*	*1,200*	*1,000*	38.5	51.5	54.8	21.8	29.0	28.0	31.8	44.0	48.8	22.2	19.4	11.8	—	—	1.9	6.6	10.2	7.7
2.5-3.0	*3,400*	*3,200*	*2,900*	31.7	50.9	56.0	16.7	26.8	33.0	25.3	45.7	50.5	19.4	15.2	13.5	—	—	2.4	4.7	9.0	14.7
3.5-4.0	*4,000*	*3,700*	*3,600*	28.7	46.9	55.0	17.3	25.3	25.7	22.0	40.6	50.4	16.6	14.9	14.0	—	—	0.9	5.0	9.0	12.3
4.5-5.0	*3,900*	*3,400*	*3,200*	22.0	42.4	52.7	12.7	21.2	27.3	15.3	37.3	47.9	16.3	14.9	11.7	—	—	2.0	2.9	6.5	12.2
5.5-6.0 (High)	*2,100*	*1,800*	*1,600*	19.1	37.9	49.7	10.4	14.4	25.9	12.8	33.8	45.1	14.4	12.7	14.2	—	—	1.4	1.8	3.8	10.4

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Subgroup Ns may vary depending on the number of forms in which the use of each drug was asked about.
[b] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated.
[c] 12th grade only: Data based on three of six forms; N is one-half of N indicated.
[d] Unadjusted for known underreporting of certain drugs. See text for details.
[e] 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.
[f] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-5 (cont.)

Lifetime Prevalence of Use of Various Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	LSD			Hallucinogens Other Than LSD[a]			PCP[b]			MDMA[b,c]			Cocaine			Crack			Other Cocaine[d]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	3.4	6.3	10.9	1.8	4.0	7.0	—	—	3.6	5.2	8.0	11.7	4.3	5.7	8.2	3.0	3.1	3.7	3.3	5.0	7.4
Gender:																					
Male	3.7	7.5	12.2	2.0	4.3	8.5	—	—	4.5	5.1	9.6	12.7	4.1	6.0	8.6	2.7	3.1	3.8	3.0	5.4	7.9
Female	3.1	5.2	9.4	1.7	3.5	5.2	—	—	2.6	5.3	6.5	10.8	4.5	5.3	7.5	3.2	2.9	3.4	3.4	4.5	6.7
College Plans:																					
None or under 4 yrs.	8.9	14.3	14.4	4.9	8.2	9.1	—	—	8.6	12.3	15.6	12.2	11.4	13.3	13.2	7.2	7.4	6.5	9.2	12.4	12.0
Complete 4 yrs.	2.8	5.1	9.5	1.5	3.3	6.1	—	—	2.4	4.4	6.9	11.2	3.5	4.4	6.6	2.5	2.3	2.8	2.6	3.8	5.8
Region:																					
Northeast	2.6	5.8	12.8	1.0	2.3	9.8	—	—	4.8	6.1	10.1	14.2	2.9	3.6	8.6	2.0	1.7	3.7	2.2	3.1	7.4
North Central	2.8	6.1	12.5	2.4	2.9	6.4	—	—	2.5	3.8	6.5	12.8	4.0	5.1	8.2	3.0	2.7	3.5	2.7	4.6	7.8
South	4.3	5.8	8.0	2.0	4.3	4.7	—	—	3.7	6.0	8.0	8.2	5.0	5.9	7.0	3.3	2.8	2.5	4.1	5.3	7.0
West	3.3	8.7	11.7	1.3	7.0	9.0	—	—	3.8	5.0	8.6	13.5	4.6	8.8	9.9	3.2	6.1	6.0	3.4	7.4	7.6
Population Density:																					
Large MSA	3.0	6.3	12.0	1.5	2.9	8.7	—	—	3.3	5.1	8.8	12.9	3.7	5.1	7.3	2.5	3.0	2.9	2.9	4.4	6.6
Other MSA	3.6	6.0	11.2	1.7	3.9	6.6	—	—	3.3	6.2	7.6	12.6	4.8	5.6	8.9	3.3	3.0	4.0	3.6	5.1	8.0
Non-MSA	3.6	7.1	9.1	2.4	5.4	5.7	—	—	4.2	3.6	7.9	8.7	4.1	6.4	7.9	2.8	3.4	4.2	3.1	5.6	7.4
Parental Education:[e]																					
1.0-2.0 (Low)	5.6	7.1	9.1	2.6	6.7	2.2	—	—	5.2	8.1	9.7	4.5	7.4	9.5	10.2	5.6	6.2	6.5	5.7	8.5	8.2
2.5-3.0	4.0	7.6	11.5	2.5	4.6	8.0	—	—	4.6	6.4	8.1	13.4	5.2	7.2	9.8	3.4	3.7	4.6	3.9	6.5	9.1
3.5-4.0	3.7	6.6	10.9	2.2	4.7	7.0	—	—	2.6	3.7	9.4	11.0	4.2	5.6	8.2	2.7	2.8	3.3	3.3	5.0	7.7
4.5-5.0	2.6	5.6	10.7	1.5	2.9	7.4	—	—	2.6	5.2	7.0	13.6	3.4	4.2	7.3	2.5	2.3	3.0	2.5	3.6	6.6
5.5-6.0 (High)	2.5	4.5	9.4	0.1	1.2	5.7	—	—	3.1	4.4	6.6	11.4	3.0	2.7	5.3	2.1	1.7	2.4	2.2	2.2	4.3

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated. 12th grade only: Data based on three of six forms; N is one-half of N indicated.

[b] 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.

[c] 8th and 10th grades only: Data based on one-third of N indicated due to changes in the questionnaire forms.

[d] 12th grade only: Data based on four of six forms; N is four-sixths of N indicated.

[e] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-5 (cont.)

Lifetime Prevalence of Use of Various Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Heroin Any Use			Heroin with a Needle[a]			Heroin without a Needle[a]			Other Narcotics[b]			Amphetamines[b]			Meth-amphetamine[c,d]			Crystal Meth. (Ice)[d]			Barbiturates[b]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	1.7	1.7	1.8	1.2	0.8	0.7	1.1	1.3	1.5	—	—	9.9	10.2	16.0	16.2	4.4	6.4	6.9	—	—	4.1	—	—	8.7
Gender:																								
Male	1.6	1.7	2.2	1.2	0.8	1.0	1.0	1.4	2.0	—	—	11.5	8.8	14.8	15.6	4.3	6.6	6.9	—	—	4.4	—	—	9.2
Female	1.8	1.5	1.4	1.1	0.7	0.3	1.2	1.2	1.1	—	—	8.3	11.5	17.2	16.5	4.5	6.0	6.7	—	—	3.4	—	—	8.0
College Plans:																								
None or under 4 yrs.	4.4	4.3	3.1	3.2	2.4	1.7	3.0	3.2	2.9	—	—	11.5	17.4	25.9	20.9	11.0	12.5	11.6	—	—	8.5	—	—	10.8
Complete 4 yrs.	1.4	1.2	1.4	0.9	0.5	0.4	0.9	1.0	1.2	—	—	9.3	9.5	14.5	14.7	3.7	5.3	5.7	—	—	3.0	—	—	8.0
Region:																								
Northeast	1.7	1.5	2.2	1.4	0.6	1.4	1.0	1.1	1.8	—	—	10.6	8.8	14.0	16.6	2.9	3.9	5.7	—	—	3.7	—	—	8.4
North Central	1.5	1.7	2.4	1.0	1.0	0.4	1.1	1.3	1.9	—	—	11.4	10.8	15.3	18.4	4.4	6.4	6.8	—	—	3.5	—	—	8.7
South	2.2	1.6	1.2	1.5	0.6	0.6	1.3	1.3	0.9	—	—	8.8	12.2	18.7	14.2	5.3	7.4	6.3	—	—	3.4	—	—	8.6
West	1.1	2.0	1.5	0.5	1.2	0.6	0.8	1.4	1.9	—	—	8.9	7.3	13.9	16.1	4.0	7.3	9.3	—	—	6.2	—	—	8.9
Population Density:																								
Large MSA	1.6	1.6	1.9	1.2	0.7	0.7	0.9	1.3	1.5	—	—	11.5	8.5	13.3	15.2	3.2	6.8	5.7	—	—	3.9	—	—	8.8
Other MSA	1.6	1.7	1.7	1.0	0.8	0.6	1.2	1.3	1.6	—	—	8.7	10.8	15.4	16.5	5.0	6.2	7.0	—	—	4.1	—	—	8.9
Non-MSA	2.1	1.7	1.9	1.4	1.0	0.6	1.1	1.4	1.5	—	—	10.1	11.1	20.6	17.0	4.8	6.4	8.3	—	—	4.1	—	—	8.0
Parental Education:[e]																								
1.0-2.0 (Low)	3.9	2.4	2.0	2.8	1.2	1.0	2.2	1.7	2.0	—	—	6.7	12.9	17.3	15.5	7.1	9.2	7.8	—	—	7.6	—	—	8.7
2.5-3.0	1.8	2.0	1.6	1.2	1.1	0.7	1.2	1.4	1.4	—	—	9.9	12.2	19.0	18.1	6.3	8.2	8.4	—	—	5.1	—	—	8.9
3.5-4.0	1.7	1.4	1.7	1.1	0.6	0.4	1.1	1.1	1.4	—	—	10.3	11.3	17.1	16.5	5.3	6.4	5.8	—	—	3.7	—	—	8.9
4.5-5.0	1.1	1.3	2.1	0.8	0.6	0.7	0.8	1.1	1.9	—	—	10.4	9.3	14.6	16.2	2.3	5.0	6.6	—	—	2.8	—	—	8.8
5.5-6.0 (High)	1.6	1.2	1.2	1.0	0.7	0.5	1.0	0.9	1.1	—	—	10.2	7.3	11.8	13.0	1.8	3.5	6.4	—	—	3.2	—	—	8.2

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 12th grade only: Data based on three of six forms; N is one-half of N indicated.
[b] Only drug use not under a doctor's orders is included here.
[c] 8th and 10th grades only: Data based on one of four forms; N is one-third of N indicated.
[d] 12th grade only: Data based on two of six forms; N is two-sixths of N indicated.
[e] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-5 (cont.)

Lifetime Prevalence of Use of Various Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Methaqualone[a,b]			Tranquilizers[b,c,d]			Rohypnol[a,e]			Alcohol			Been Drunk[f]			Cigarettes			Smokeless Tobacco[a,c]			Steroids[f]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	—	—	1.1	4.7	8.1	9.2	1.1	1.5	1.7	50.5	70.1	79.7	23.4	48.2	63.9	36.6	52.8	61.0	11.7	19.5	19.7	2.8	3.5	3.7
Gender:																								
Male	—	—	1.2	4.0	8.0	9.5	1.3	1.3	1.9	52.0	69.5	80.3	23.6	49.0	65.1	37.6	52.5	62.0	19.1	31.7	30.9	3.8	5.0	5.7
Female	—	—	0.8	5.5	8.1	8.6	0.9	1.6	1.4	49.2	70.6	79.0	23.0	47.4	62.2	35.4	53.0	59.6	5.0	8.2	8.9	2.0	2.0	1.8
College Plans:																								
None or under 4 yrs.	—	—	1.2	11.6	12.0	11.6	3.9	3.4	2.1	64.9	80.4	83.5	40.6	63.9	68.5	57.2	69.1	70.5	27.5	34.3	27.8	5.4	4.9	6.3
Complete 4 yrs.	—	—	0.9	4.0	7.5	8.2	0.8	1.2	1.6	49.0	68.5	78.5	21.6	45.8	61.9	34.0	50.1	57.9	10.0	17.2	17.3	2.5	3.2	3.0
Region:																								
Northeast	—	—	1.4	2.9	6.0	9.5	1.2	0.9	2.3	51.9	70.2	82.2	23.7	45.8	66.8	34.2	48.4	62.1	8.5	13.2	14.7	3.3	3.2	6.2
North Central	—	—	1.1	4.4	5.6	8.7	1.6	1.2	1.0	48.5	71.2	82.3	22.9	50.3	68.7	36.2	54.2	64.7	11.9	21.5	24.3	3.1	2.5	3.1
South	—	—	1.5	5.9	11.2	8.8	1.1	1.8	2.3	53.8	68.9	77.1	25.5	47.2	59.5	41.4	56.7	58.8	15.2	24.3	20.1	3.0	4.2	3.1
West	—	—	0.3	4.3	8.6	10.5	0.5	2.0	1.4	46.1	70.6	77.7	20.2	49.3	61.8	30.7	47.0	58.3	8.2	12.8	17.2	1.8	3.9	3.6
Population Density:																								
Large MSA	—	—	1.4	3.7	5.9	10.4	1.4	1.8	2.3	49.1	67.3	79.9	21.1	43.6	61.6	31.3	47.6	58.5	7.8	13.1	12.4	2.9	3.1	3.5
Other MSA	—	—	0.9	5.2	7.8	8.9	0.9	1.2	1.7	49.9	70.3	79.9	23.1	48.7	63.9	35.5	52.3	60.2	9.7	18.2	17.8	2.6	3.5	4.0
Non-MSA	—	—	1.2	4.9	11.3	8.4	1.0	1.6	1.2	53.5	72.9	78.9	26.7	52.3	66.3	45.1	60.0	65.5	19.8	29.4	31.7	3.2	3.8	3.4
Parental Education:[g]																								
1.0-2.0 (Low)	—	—	0.6	6.3	10.3	5.4	2.4	2.3	4.2	60.7	72.1	78.6	33.9	48.2	55.0	50.6	54.9	60.7	14.4	16.6	15.5	3.3	2.8	4.3
2.5-3.0	—	—	1.0	6.2	8.0	10.5	0.7	1.8	2.0	59.2	74.3	80.6	29.6	51.0	65.6	46.4	59.5	62.6	13.9	23.2	20.8	3.0	3.8	4.1
3.5-4.0	—	—	0.4	5.6	9.8	8.9	1.6	1.2	1.1	54.5	73.2	80.9	25.3	51.0	64.1	40.5	54.2	63.1	13.7	21.9	20.5	3.0	3.6	3.4
4.5-5.0	—	—	1.0	3.8	7.3	9.6	1.0	1.7	1.8	44.9	66.9	79.9	19.2	45.8	64.6	27.7	49.0	59.6	9.5	18.6	18.7	2.6	3.3	2.8
5.5-6.0 (High)	—	—	2.0	1.9	4.9	7.1	0.6	0.6	1.2	39.3	64.1	76.9	15.1	45.3	63.9	22.5	44.7	56.5	8.2	12.2	22.2	2.7	3.2	3.5

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.

[b] Only drug use not under a doctor's orders is included here.

[c] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated.

[d] 12th grade only: Data based on three of six forms; N is one-half of N indicated.

[e] 8th and 10th grades only: Data based on two of four forms; N is one-third of N indicated.

[f] 12th grade only: Data based on two of six forms; N is two-sixths of N indicated.

[g] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

TABLE 4-6
Annual Prevalence of Use of Various Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 2001
(Entries are percentages)

	Approx. N[a]			Any Illicit Drug			Any Illicit Drug Other Than Marijuana[b,c]			Marijuana			Inhalants[c,d]			Amyl/Butyl Nitrites[e]			Hallucinogens[b,c,d]			LSD		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	*16,200*	*14,000*	*12,800*	19.5	37.2	41.4	9.9	16.8	19.8	15.4	32.7	37.0	9.1	6.6	4.5	—	—	0.6	2.5	5.2	8.4	2.2	4.1	6.6
Gender:																								
Male	*7,500*	*6,600*	*5,800*	21.3	39.6	43.8	9.4	15.7	20.1	18.1	36.0	40.1	8.4	6.7	5.5	—	—	1.0	2.7	5.8	9.9	2.3	5.1	7.9
Female	*8,300*	*7,100*	*6,500*	17.5	35.0	38.4	10.5	17.6	18.3	12.8	29.6	33.6	9.9	6.5	3.5	—	—	0.2	2.4	4.2	6.4	2.1	3.1	5.0
College Plans:																								
None or under 4 yrs.	*1,600*	*1,900*	*2,500*	38.5	52.7	46.2	20.0	28.1	24.9	34.4	47.4	41.5	15.1	11.0	6.6	—	—	1.1	7.7	11.5	9.6	5.8	9.9	8.2
Complete 4 yrs.	*14,100*	*11,900*	*9,600*	17.2	34.6	39.6	8.9	15.0	17.4	13.2	30.3	35.3	8.6	5.9	3.9	—	—	0.5	1.9	4.0	7.4	1.8	3.2	5.7
Region:																								
Northeast	*2,900*	*2,700*	*2,400*	18.1	37.4	47.4	6.6	13.1	22.2	14.5	34.1	43.8	9.4	6.5	5.7	—	—	1.0	1.8	4.4	10.8	1.9	4.0	6.7
North Central	*4,000*	*4,100*	*3,700*	18.0	35.9	42.0	10.0	15.3	18.0	14.1	31.7	36.9	8.8	6.5	5.0	—	—	0.3	1.9	5.4	8.2	1.7	4.3	8.6
South	*5,900*	*5,000*	*4,100*	21.5	36.7	37.3	12.6	18.8	18.6	16.8	31.2	32.4	9.5	6.8	3.4	—	—	0.5	3.3	4.8	6.3	2.7	3.5	4.7
West	*3,400*	*2,200*	*2,600*	18.9	40.7	41.9	8.0	19.6	21.8	15.5	36.4	38.4	8.6	6.7	4.8	—	—	1.0	2.3	6.4	9.6	2.0	5.3	6.6
Population Density:																								
Large MSA	*4,700*	*3,900*	*3,800*	16.4	34.0	43.9	6.8	12.6	20.0	12.4	30.0	39.2	8.2	6.0	4.4	—	—	0.3	1.9	4.1	9.6	1.8	3.8	7.7
Other MSA	*7,500*	*6,700*	*5,800*	21.5	39.0	41.0	11.4	17.3	19.6	17.4	35.2	36.7	8.9	6.9	4.3	—	—	0.9	2.6	5.4	8.5	2.3	4.1	6.4
Non-MSA	*4,000*	*3,400*	*3,200*	19.1	37.4	39.4	11.0	20.8	20.1	15.3	30.9	35.1	10.4	7.0	5.2	—	—	0.4	2.9	5.8	6.7	2.4	4.6	5.6
Parental Education:[f]																								
1.0-2.0 (Low)	*1,300*	*1,200*	*1,000*	29.9	39.0	38.8	14.6	21.1	15.8	26.0	33.6	33.9	10.7	7.6	3.2	—	—	1.9	4.9	6.5	5.3	4.1	3.9	5.4
2.5-3.0	*3,400*	*3,200*	*2,900*	23.3	41.6	41.9	11.4	18.4	22.3	19.5	37.1	37.0	9.7	7.5	5.7	—	—	0.5	3.1	5.9	9.5	2.6	4.8	6.7
3.5-4.0	*4,000*	*3,700*	*3,600*	21.5	38.2	42.7	11.5	18.8	18.1	16.7	32.6	38.4	9.4	5.9	4.2	—	—	0.2	2.9	6.2	7.4	2.4	4.3	6.3
4.5-5.0	*3,900*	*3,400*	*3,200*	15.0	35.1	41.3	8.2	15.4	19.9	11.1	31.4	37.4	9.0	6.8	3.8	—	—	1.0	1.9	4.3	8.7	1.5	3.8	6.7
5.5-6.0 (High)	*2,100*	*1,800*	*1,600*	13.4	32.7	40.1	6.6	10.3	18.6	9.4	29.4	35.2	7.7	5.5	5.8	—	—	0.0	0.7	2.9	7.0	1.3	3.5	5.6

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Subgroup Ns may vary depending on the number of forms in which the use of each drug was asked about.
[b] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated.
[c] 12th grade only: Data based on three of six forms; N is one-half of N indicated.
[d] Unadjusted for known underreporting of certain drugs. See text for details.
[e] 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.
[f] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-6 (cont.)

Annual Prevalence of Use of Various Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Hallucinogens Other Than LSD[a,b]			PCP[c]			MDMA[c,d]			Cocaine			Crack			Other Cocaine[e]			Heroin Any Use			Heroin with a Needle[b]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	1.1	2.8	4.4	—	—	1.8	3.5	6.2	9.2	2.5	3.6	4.8	1.7	1.8	2.1	1.9	3.0	4.4	1.0	0.9	0.9	0.7	0.4	0.3
Gender:																								
Male	1.3	3.1	5.8	—	—	2.7	3.4	7.6	10.5	2.4	3.8	5.4	1.6	1.9	2.4	1.8	3.3	4.9	1.0	1.0	1.3	0.7	0.5	0.5
Female	1.1	2.4	2.9	—	—	1.0	3.7	4.9	8.0	2.6	3.2	4.1	1.8	1.7	1.8	2.0	2.6	3.7	1.0	0.8	0.6	0.7	0.3	0.1
College Plans:																								
None or under 4 yrs.	3.7	6.5	4.7	—	—	5.2	9.2	13.6	9.8	7.0	9.1	8.2	4.4	4.7	4.4	5.3	8.2	7.4	3.1	2.5	1.3	2.2	1.4	0.7
Complete 4 yrs.	0.9	2.1	4.0	—	—	1.0	2.9	5.1	8.7	2.0	2.7	3.7	1.4	1.4	1.5	1.5	2.1	3.4	0.8	0.7	0.7	0.6	0.3	0.2
Region:																								
Northeast	0.5	2.0	7.4	—	—	1.7	3.8	8.2	10.1	1.9	2.3	4.8	1.2	1.0	2.0	1.6	2.0	4.4	1.1	1.0	1.2	0.9	0.5	0.7
North Central	1.4	2.2	3.9	—	—	1.6	2.9	4.8	11.8	2.3	3.4	5.7	1.7	1.8	2.6	1.6	3.0	5.6	1.0	1.1	1.3	0.7	0.5	0.2
South	1.4	2.8	2.4	—	—	1.3	3.7	5.9	5.7	3.2	3.8	3.9	2.0	1.7	1.2	2.4	3.2	3.9	1.2	0.9	0.6	0.9	0.3	0.1
West	0.9	4.6	5.7	—	—	3.1	3.6	6.8	10.3	2.4	4.9	5.0	1.7	3.3	3.0	1.7	3.9	3.5	0.7	0.7	0.8	0.3	0.5	0.4
Population Density:																								
Large MSA	1.0	2.3	5.7	—	—	1.7	3.1	7.3	10.9	2.1	3.2	4.3	1.4	1.9	1.5	1.6	2.5	4.1	0.9	0.9	1.1	0.7	0.4	0.4
Other MSA	1.1	2.7	4.3	—	—	2.0	4.3	5.5	9.7	2.8	3.7	5.0	1.8	1.8	2.2	2.2	3.2	4.3	1.0	1.0	0.8	0.6	0.5	0.3
Non-MSA	1.5	3.4	3.1	—	—	1.4	2.5	6.3	6.4	2.5	3.8	5.2	1.8	1.8	2.8	1.6	3.2	5.0	1.1	0.9	0.9	1.0	0.4	0.2
Parental Education:[f]																								
1.0-2.0 (Low)	1.8	4.5	3.0	—	—	4.0	5.8	7.2	3.8	4.4	5.6	5.7	3.2	3.0	3.8	3.7	4.8	3.7	2.6	1.1	1.3	2.0	0.5	0.7
2.5-3.0	1.6	3.1	4.8	—	—	1.7	4.3	6.5	10.3	2.8	5.2	6.0	1.8	2.5	2.6	1.9	4.5	5.6	1.1	1.3	0.5	0.7	0.7	0.3
3.5-4.0	1.1	3.7	4.2	—	—	1.7	2.4	7.0	8.4	2.4	2.9	4.8	1.3	1.4	1.8	1.8	2.5	4.7	1.0	0.6	1.0	0.6	0.2	0.1
4.5-5.0	1.0	1.7	4.5	—	—	1.2	3.3	5.3	11.2	2.1	2.7	4.4	1.5	1.6	1.9	1.6	2.2	3.9	0.6	0.8	1.0	0.5	0.3	0.4
5.5-6.0 (High)	0.0	1.2	3.5	—	—	1.9	3.0	5.8	8.1	1.6	2.0	2.6	1.3	1.2	1.2	1.1	1.4	2.2	0.8	0.9	0.8	0.7	0.5	0.3

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated.

[b] 12th grade only: Data based on three of six forms; N is one-half of N indicated.

[c] 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.

[d] 8th and 10th grades only: Data based on one-third of N indicated due to changes in the questionnaire forms.

[e] 12th grade only: Data based on four of six forms; N is four-sixths of N indicated.

[f] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-6 (cont.)

Annual Prevalence of Use of Various Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Heroin without a Needle[a]			Other Narcotics[b]			Amphetamines[b]			Meth-amphetamine[c,d]			Crystal Meth. (Ice)[d]			Barbiturates[b]			Methaqualone[b,e]			Tranquilizers[a,b,f]			Rohypnol[c,g]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	0.6	0.7	0.8	—	—	6.7	6.7	11.7	10.9	2.8	3.7	3.9	—	—	2.5	—	—	5.7	—	—	0.8	3.0	5.9	6.5	0.7	1.0	0.9
Gender:																											
Male	0.6	0.8	1.3	—	—	8.0	5.7	10.6	10.9	2.5	3.8	4.3	—	—	2.7	—	—	6.3	—	—	1.0	2.5	5.7	6.9	0.6	1.1	1.1
Female	0.6	0.6	0.4	—	—	5.6	7.5	12.7	10.6	3.0	3.5	3.4	—	—	2.1	—	—	5.1	—	—	0.3	3.6	6.2	5.9	0.7	0.9	0.6
College Plans:																											
None or under 4 yrs.	1.9	1.7	1.3	—	—	7.5	12.0	20.4	14.4	6.6	7.0	6.9	—	—	4.2	—	—	7.1	—	—	1.0	7.1	9.2	8.4	2.0	2.8	1.2
Complete 4 yrs.	0.5	0.5	0.7	—	—	6.4	6.1	10.3	9.8	2.3	3.1	3.2	—	—	2.0	—	—	5.4	—	—	0.5	2.5	5.4	5.8	0.5	0.7	0.8
Region:																											
Northeast	0.7	0.8	1.3	—	—	7.2	5.5	10.5	12.0	1.2	2.3	3.4	—	—	1.9	—	—	5.3	—	—	1.2	1.6	4.5	7.1	0.9	0.9	1.7
North Central	0.6	0.8	1.1	—	—	7.8	7.1	10.7	12.7	3.2	3.8	4.7	—	—	2.1	—	—	5.6	—	—	0.6	3.1	3.5	6.2	1.0	0.9	0.5
South	0.6	0.7	0.3	—	—	5.7	8.1	14.0	9.5	3.4	4.0	3.4	—	—	1.7	—	—	6.1	—	—	1.1	3.6	8.3	5.6	0.6	1.0	1.0
West	0.5	0.5	0.9	—	—	6.5	4.6	9.9	9.7	2.4	4.6	4.4	—	—	4.7	—	—	5.6	—	—	0.1	3.2	6.8	7.9	0.4	1.3	0.8
Population Density:																											
Large MSA	0.5	0.8	1.0	—	—	8.4	5.0	9.8	10.6	1.6	4.0	2.7	—	—	2.7	—	—	5.9	—	—	0.6	2.2	4.9	7.9	1.2	1.2	1.0
Other MSA	0.8	0.7	0.8	—	—	5.6	7.6	11.1	10.8	3.4	3.6	4.0	—	—	2.3	—	—	6.1	—	—	0.7	3.6	5.8	6.2	0.5	0.8	1.2
Non-MSA	0.4	0.7	0.7	—	—	6.9	6.9	15.1	11.4	2.3	3.6	5.3	—	—	2.5	—	—	4.9	—	—	1.1	3.0	7.5	5.5	0.4	1.2	0.3
Parental Education:[h]																											
1.0-2.0 (Low)	1.3	0.9	1.5	—	—	5.1	7.4	12.3	8.9	4.4	5.6	5.0	—	—	5.9	—	—	6.3	—	—	0.3	3.5	6.0	4.5	1.3	2.3	4.2
2.5-3.0	0.6	0.9	0.5	—	—	6.4	8.2	13.6	12.2	4.0	4.6	4.8	—	—	2.4	—	—	5.3	—	—	0.7	3.7	5.8	7.3	0.3	1.1	0.4
3.5-4.0	0.6	0.5	0.8	—	—	7.1	7.8	12.6	11.6	3.0	3.2	3.8	—	—	2.8	—	—	6.1	—	—	0.0	4.2	7.9	6.5	1.2	0.7	0.8
4.5-5.0	0.5	0.6	1.1	—	—	7.0	5.9	10.5	10.7	1.6	3.6	3.1	—	—	1.5	—	—	5.9	—	—	0.9	2.3	5.4	7.0	0.7	1.1	0.8
5.5-6.0 (High)	0.4	0.6	0.8	—	—	7.0	4.5	9.2	8.7	1.2	2.5	3.2	—	—	2.0	—	—	5.8	—	—	0.9	1.4	3.1	4.6	0.2	0.3	0.2

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 12th grade only: Data based on three of six forms; N is one-half of N indicated.
[b] Only drug use not under a doctor's orders is included here.
[c] 8th and 10th grades only: Data based on one of four forms; N is one-third of N indicated.
[d] 12th grade only: Data based on two of six forms; N is two-sixths of N indicated.
[e] For 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.
[f] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated.
[g] 8th and 10th grades only: Data based on two of four forms; N is one-third of N indicated.
[h] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-6 (cont.)
Annual Prevalence of Use of Various Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 2001
(Entries are percentages)

	GHB[a,b]			Ketamine[a,b]			Alcohol			Been Drunk[c]			Cigarettes			Bidis[a,c]			Kreteks[a,c]			Smokeless Tobacco			Steroids[c]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	1.1	1.0	1.6	1.3	2.1	2.5	41.9	63.5	73.3	16.6	39.9	53.2	—	—	—	2.7	4.9	7.0	2.6	6.0	10.1	—	—	—	1.6	2.1	2.4
Gender:																											
Male	1.4	1.4	2.0	1.5	2.2	3.0	42.7	63.1	75.2	16.7	41.3	56.0	—	—	—	3.2	6.5	9.2	3.3	7.1	11.5	—	—	—	2.3	3.3	3.8
Female	0.8	0.6	1.1	1.2	1.8	1.9	41.2	63.9	71.5	16.3	38.7	50.3	—	—	—	2.1	3.4	5.0	2.1	5.2	9.0	—	—	—	1.0	1.0	1.1
College Plans:																											
None or under 4 yrs.	4.2	2.0	3.0	2.6	3.6	4.0	57.4	74.4	76.5	31.5	54.2	55.1	—	—	—	6.6	8.3	7.6	6.5	9.3	11.7	—	—	—	3.1	3.2	4.6
Complete 4 yrs.	0.7	0.8	1.1	1.2	1.8	2.0	40.3	61.9	72.3	15.1	37.7	52.1	—	—	—	2.3	4.3	6.7	2.3	5.4	9.6	—	—	—	1.5	1.9	1.8
Region:																											
Northeast	0.4	1.2	2.1	0.9	3.2	3.4	43.9	64.3	77.2	17.2	38.8	56.8	—	—	—	2.4	6.7	8.6	2.9	7.2	12.8	—	—	—	1.8	1.9	4.5
North Central	1.1	0.7	2.0	1.0	1.6	3.4	41.5	65.8	76.7	17.1	42.2	59.6	—	—	—	1.8	4.5	3.7	1.6	4.8	7.2	—	—	—	1.7	1.5	1.7
South	1.5	1.2	1.1	1.9	1.8	1.3	44.0	61.6	69.7	17.6	38.6	47.8	—	—	—	3.4	4.3	5.8	3.2	5.7	7.8	—	—	—	1.9	2.5	2.1
West	0.9	0.9	1.6	1.0	1.9	2.5	37.2	62.8	70.6	13.7	40.1	49.7	—	—	—	2.7	4.7	12.2	2.7	7.6	15.7	—	—	—	0.9	2.3	2.1
Population Density:																											
Large MSA	0.7	1.2	1.9	0.7	2.8	3.0	40.7	61.5	73.4	14.9	35.7	52.2	—	—	—	2.7	5.3	8.8	2.3	6.2	10.0	—	—	—	1.6	1.9	1.9
Other MSA	1.0	0.9	1.5	2.2	2.2	2.2	41.5	63.5	73.6	16.3	40.7	52.7	—	—	—	2.6	5.6	7.1	2.9	6.5	11.1	—	—	—	1.7	2.0	2.9
Non-MSA	1.6	0.9	1.5	0.5	0.9	2.4	44.2	65.9	72.6	19.1	43.4	55.1	—	—	—	2.7	3.1	5.0	2.5	5.0	8.5	—	—	—	1.6	2.4	2.0
Parental Education:[d]																											
1.0-2.0 (Low)	1.4	1.5	2.6	2.9	1.2	4.1	49.9	64.5	70.4	22.9	38.0	42.1	—	—	—	2.6	1.9	7.1	1.9	3.8	9.4	—	—	—	2.0	1.6	2.1
2.5-3.0	1.0	0.9	1.7	1.0	2.1	3.2	49.1	66.4	72.9	20.3	41.6	52.6	—	—	—	3.0	4.2	6.4	3.0	5.0	7.1	—	—	—	1.6	2.1	3.2
3.5-4.0	1.3	1.0	1.0	1.5	2.1	1.6	45.0	66.4	74.4	18.7	42.3	53.4	—	—	—	3.3	5.4	5.7	3.7	6.2	9.6	—	—	—	1.9	2.3	1.9
4.5-5.0	0.8	0.7	2.0	0.9	2.2	2.6	37.9	61.4	74.8	14.2	39.2	55.7	—	—	—	2.1	5.4	7.5	2.2	6.8	11.3	—	—	—	1.5	2.0	1.9
5.5-6.0 (High)	1.3	1.2	0.7	1.2	2.1	1.4	34.2	59.4	72.3	10.2	38.3	55.3	—	—	—	2.3	6.8	9.6	2.1	8.8	14.8	—	—	—	1.7	2.1	2.2

NOTES: '—' indicates data not available. '*' indicates less than .05 percent but greater than 0 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 8th and 10th grades only: Data based on one of four forms; N is one-third of N indicated.

[b] 12th grade only: Data based on three of six forms; N is one-half of N indicated.

[c] 12th grade only: Data based on two of six forms; N is two-sixths of N indicated.

[d] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

TABLE 4-7
Thirty-Day Prevalence of Use of Various Drugs by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Approx. N[a]			Any Illicit Drug			Any Illicit Drug Other Than Marijuana			Marijuana			Inhalants[b,c]			Amyl/Butyl Nitrites[d]			Hallucinogens[c]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	*16,200*	*14,000*	*12,800*	11.7	22.7	25.7	5.5	8.7	10.8	9.2	19.8	22.4	4.0	2.5	1.7	—	—	0.5	1.2	2.1	3.2
Gender:																					
Male	*7,500*	*6,600*	*5,800*	13.2	24.9	28.4	4.8	8.5	11.5	11.0	22.7	25.6	3.6	2.5	2.3	—	—	1.0	1.3	2.8	4.0
Female	*8,300*	*7,100*	*6,500*	9.9	20.5	22.6	6.0	8.5	9.4	7.3	16.8	19.1	4.3	2.4	1.1	—	—	0.1	1.2	1.2	2.0
College Plans:																					
None or under 4 yrs.	*1,600*	*1,900*	*2,500*	27.5	39.1	30.9	12.7	16.3	14.0	23.9	35.2	27.5	8.0	4.7	3.2	—	—	1.0	3.8	4.7	3.5
Complete 4 yrs.	*14,100*	*11,900*	*9,600*	9.8	20.1	23.8	4.7	7.4	9.3	7.5	17.3	20.4	3.6	2.1	1.2	—	—	0.4	1.0	1.6	2.8
Region:																					
Northeast	*2,900*	*2,700*	*2,400*	11.3	24.4	31.5	3.6	7.5	12.9	8.7	21.3	28.4	3.9	2.5	2.6	—	—	0.7	0.4	2.0	5.1
North Central	*4,000*	*4,100*	*3,700*	10.4	21.3	26.2	5.6	7.1	10.4	7.9	19.1	22.7	3.6	1.9	1.9	—	—	0.3	0.9	2.0	3.6
South	*5,900*	*5,000*	*4,100*	12.9	21.4	21.6	6.6	10.1	9.6	10.0	18.0	18.1	4.4	2.9	1.0	—	—	0.4	1.7	1.8	1.8
West	*3,400*	*2,200*	*2,600*	11.3	26.3	26.5	5.1	9.8	11.4	9.8	23.0	23.5	3.6	2.5	1.6	—	—	0.7	1.3	2.8	3.0
Population Density:																					
Large MSA	*4,700*	*3,900*	*3,800*	9.1	21.4	27.0	3.7	7.4	10.8	7.1	18.5	23.4	3.5	2.3	1.4	—	—	0.3	0.9	1.6	3.8
Other MSA	*7,500*	*6,700*	*5,800*	13.4	23.2	25.9	6.1	8.5	10.6	10.5	21.0	22.5	4.1	2.5	1.7	—	—	0.7	1.1	2.1	3.0
Non-MSA	*4,000*	*3,400*	*3,200*	11.3	23.3	24.0	6.5	10.6	11.3	9.1	18.7	21.2	4.3	2.6	2.0	—	—	0.3	1.9	2.7	2.7
Parental Education:[e]																					
1.0-2.0 (Low)	*1,300*	*1,200*	*1,000*	18.4	24.0	24.7	7.5	9.9	9.6	16.4	20.6	20.9	5.0	3.7	1.3	—	—	1.5	3.0	3.4	1.3
2.5-3.0	*3,400*	*3,200*	*2,900*	14.6	26.4	25.1	6.8	10.1	12.6	11.9	22.8	21.7	4.6	2.4	2.1	—	—	0.3	1.3	2.5	3.7
3.5-4.0	*4,000*	*3,700*	*3,600*	12.5	23.4	27.0	6.0	9.8	10.2	9.6	20.8	23.6	4.2	2.1	1.4	—	—	0.2	1.2	2.2	2.9
4.5-5.0	*3,900*	*3,400*	*3,200*	8.8	20.2	25.4	4.3	7.1	10.4	6.5	17.5	22.3	3.6	2.7	1.5	—	—	0.9	0.7	1.6	3.4
5.5-6.0 (High)	*2,100*	*1,800*	*1,600*	7.5	19.9	24.0	3.7	6.0	7.7	5.3	17.2	20.5	2.8	1.7	2.0	—	—	0.0	0.9	1.0	2.0

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Subgroup Ns may vary depending on the number of forms in which the use of each drug was asked about.
[b] 12th grade only: Data based on three of six forms; N is one-half of N indicated.
[c] Unadjusted for known underreporting of certain drugs. See text for details.
[d] 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.
[e] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-7 (cont.)
Thirty-Day Prevalence of Use of Various Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	LSD			Hallucinogens Other Than LSD			PCP[a]			MDMA[a]			Cocaine			Crack			Other Cocaine[b]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	1.0	1.5	2.3	0.6	1.1	1.8	—	—	0.5	1.8	2.6	2.8	1.2	1.3	2.1	0.8	0.7	1.1	1.0	1.2	1.8
Gender:																					
Male	1.0	2.0	3.0	0.7	1.4	2.2	—	—	0.7	1.9	3.5	3.7	1.1	1.5	2.5	0.6	0.9	1.2	0.9	1.3	2.2
Female	1.0	0.9	1.4	0.6	0.7	1.1	—	—	0.2	1.8	1.6	2.0	1.2	1.2	1.6	0.8	0.6	1.0	1.0	1.0	1.3
College Plans:																					
None or under 4 yrs.	2.7	3.7	3.2	1.6	3.0	2.0	—	—	0.9	3.9	7.0	3.1	3.5	3.9	4.1	2.0	2.4	2.4	2.7	3.8	3.5
Complete 4 yrs.	0.8	1.1	1.8	0.5	0.7	1.5	—	—	0.4	1.6	1.9	2.4	0.9	0.9	1.5	0.6	0.5	0.8	0.7	0.8	1.2
Region:																					
Northeast	0.8	1.8	2.6	0.0	0.7	3.5	—	—	0.6	1.9	2.9	4.0	0.7	1.0	2.3	0.5	0.7	1.2	0.6	0.8	1.9
North Central	0.8	1.4	3.3	1.0	1.3	1.9	—	—	0.5	1.9	1.9	3.5	0.9	1.4	2.5	0.6	0.7	1.5	0.7	1.2	2.5
South	1.3	1.1	1.4	0.8	0.9	0.8	—	—	0.3	2.3	2.6	2.1	1.6	1.2	1.6	0.9	0.5	0.6	1.4	1.1	1.5
West	0.8	2.0	1.8	0.6	1.5	1.4	—	—	0.7	0.9	3.4	1.7	1.1	2.0	2.1	0.9	1.4	1.5	0.8	1.8	1.3
Population Density:																					
Large MSA	0.8	1.3	2.6	0.5	1.1	2.3	—	—	0.6	1.1	3.0	4.3	1.0	1.3	2.0	0.6	0.7	0.8	0.9	1.2	1.7
Other MSA	1.0	1.5	2.2	0.5	0.9	1.6	—	—	0.7	2.3	2.3	2.9	1.4	1.5	1.9	0.9	0.9	1.1	1.1	1.3	1.7
Non-MSA	1.1	1.6	1.9	1.1	1.2	1.4	—	—	0.2	1.8	2.5	0.9	1.1	1.0	2.7	0.7	0.5	1.6	0.8	1.0	2.1
Parental Education:[c]																					
1.0-2.0 (Low)	2.0	1.9	2.2	1.0	2.4	1.3	—	—	0.4	2.3	4.2	2.3	2.7	2.2	2.9	1.8	1.5	2.8	2.4	2.2	1.1
2.5-3.0	1.1	1.5	2.2	0.8	1.6	1.7	—	—	0.4	2.3	3.2	3.2	0.9	2.1	2.2	0.6	1.1	1.1	0.7	1.7	2.1
3.5-4.0	1.0	1.3	2.2	0.7	1.0	1.7	—	—	0.5	1.0	2.4	2.7	1.1	0.7	2.0	0.7	0.2	0.9	0.8	0.7	1.8
4.5-5.0	0.6	1.4	2.1	0.4	0.5	2.0	—	—	0.7	1.9	2.3	2.4	1.0	1.1	2.0	0.6	0.6	1.0	0.8	0.9	1.7
5.5-6.0 (High)	0.6	1.3	1.8	0.3	0.2	0.6	—	—	0.0	2.2	2.0	3.8	0.7	0.8	1.3	0.4	0.6	0.6	0.5	0.4	1.1

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 8th and 10th grades only: Data based on one-third of N indicated due to changes in the questionnaire forms. 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.

[b] 12th grade only: Data based on four of six forms; N is four-sixths of N indicated.

[c] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-7 (cont.)

Thirty-Day Prevalence of Use of Various Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Heroin Any Use			Heroin with a Needle[a]			Heroin without a Needle[a]			Other Narcotics[b]			Amphetamines[b]			Meth-amphetamine[c,d]			Crystal Meth. (Ice)[d]			Barbiturates[b]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	0.6	0.3	0.4	0.4	0.2	0.2	0.4	0.2	0.4	—	—	3.0	3.2	5.6	5.6	1.3	1.5	1.6	—	—	1.1	—	—	2.8
Gender:																								
Male	0.6	0.5	0.7	0.4	0.3	0.4	0.3	0.3	0.6	—	—	3.7	2.8	5.1	5.5	1.4	1.4	1.2	—	—	1.5	—	—	3.1
Female	0.6	0.2	0.1	0.3	0.1	*	0.3	0.1	0.1	—	—	2.3	3.5	6.1	5.5	1.2	1.5	1.7	—	—	0.7	—	—	2.4
College Plans:																								
None or under 4 yrs.	1.7	1.1	0.7	1.0	0.6	0.5	1.1	0.9	0.7	—	—	3.7	6.4	10.8	7.0	4.9	2.9	3.1	—	—	1.9	—	—	3.9
Complete 4 yrs.	0.5	0.2	0.3	0.3	0.1	0.1	0.3	0.1	0.3	—	—	2.7	2.8	4.8	5.1	0.9	1.3	1.2	—	—	0.9	—	—	2.4
Region:																								
Northeast	0.7	0.4	0.7	0.6	0.3	0.6	0.4	0.3	0.7	—	—	3.3	2.6	5.1	6.6	0.7	1.0	1.5	—	—	1.1	—	—	2.4
North Central	0.5	0.4	0.5	0.3	0.3	0.2	0.4	0.3	0.5	—	—	3.8	3.7	4.7	7.1	1.7	1.5	2.1	—	—	1.1	—	—	3.1
South	0.7	0.3	0.2	0.4	0.1	*	0.3	0.2	0.1	—	—	2.3	3.8	7.1	4.7	1.7	1.6	0.9	—	—	0.7	—	—	3.0
West	0.4	0.3	0.4	0.2	0.2	0.1	0.3	0.2	0.3	—	—	2.6	2.1	4.6	4.2	0.7	1.8	1.8	—	—	2.0	—	—	2.2
Population Density:																								
Large MSA	0.5	0.3	0.6	0.4	0.2	0.4	0.2	0.2	0.3	—	—	3.5	2.3	5.3	5.9	0.6	1.7	1.3	—	—	1.3	—	—	2.9
Other MSA	0.7	0.3	0.4	0.3	0.2	0.1	0.5	0.3	0.4	—	—	2.7	3.6	4.9	5.5	1.5	1.4	1.5	—	—	0.9	—	—	2.8
Non-MSA	0.6	0.3	0.3	0.4	0.2	0.1	0.3	0.2	0.3	—	—	2.8	3.5	7.5	5.6	1.7	1.3	1.9	—	—	1.4	—	—	2.6
Parental Education:[e]																								
1.0-2.0 (Low)	1.1	0.4	1.1	0.5	0.2	0.7	0.7	0.4	1.5	—	—	2.8	3.4	5.4	4.8	1.9	2.2	1.5	—	—	3.0	—	—	2.4
2.5-3.0	0.6	0.4	0.2	0.3	0.3	0.2	0.3	0.3	0.1	—	—	2.9	3.8	7.4	6.1	1.9	2.2	2.3	—	—	0.4	—	—	2.9
3.5-4.0	0.6	0.1	0.2	0.3	0.1	*	0.5	0.1	0.1	—	—	2.8	3.8	5.5	6.0	1.4	1.2	1.4	—	—	1.4	—	—	2.7
4.5-5.0	0.5	0.3	0.5	0.4	0.2	0.1	0.2	0.2	0.5	—	—	3.1	2.8	4.7	5.2	0.6	1.3	1.0	—	—	0.7	—	—	2.9
5.5-6.0 (High)	0.5	0.2	0.5	0.3	0.1	0.3	0.2	0.2	0.3	—	—	2.9	2.1	4.8	4.9	0.9	0.8	1.7	—	—	1.7	—	—	2.7

NOTES: '—' indicates data not available. '*' indicates less than .05 percent but greater than 0 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] 12th grade only: Data based on three of six forms; N is one-half of N indicated.

[b] Only drug use not under a doctor's orders is included here.

[c] 8th and 10th grades only: Data based on one of four forms; N is one-third of N indicated.

[d] 12th grade only: Data based on two of six forms; N is two-sixths of N indicated.

[e] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

(Table continued on next page)

TABLE 4-7 (cont.)
Thirty-Day Prevalence of Use of Various Drugs by Subgroups
Eighth, Tenth, and Twelfth Graders, 2001
(Entries are percentages)

	Methaqualone[a,b]			Tranquilizers[b]			Rohypnol[a]			Alcohol			Been Drunk[c]			Cigarettes			Smokeless Tobacco[d]			Steroids[c]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	—	—	0.5	1.6	2.9	3.0	0.4	0.2	0.3	21.5	39.0	49.8	7.7	21.9	32.7	12.2	21.3	29.5	4.0	6.9	7.8	0.7	0.9	1.3
Gender:																								
Male	—	—	0.8	1.2	2.7	3.0	0.3	0.3	0.3	22.3	41.1	54.7	7.8	24.2	37.0	12.2	20.9	29.7	6.9	12.7	14.2	1.1	1.4	1.7
Female	—	—	0.2	2.1	3.0	2.8	0.5	0.2	0.2	20.6	36.8	45.1	7.4	19.7	28.4	12.0	21.5	28.7	1.4	1.6	1.6	0.4	0.5	0.8
College Plans:																								
None or under 4 yrs.	—	—	0.8	4.1	4.5	4.3	0.9	1.3	0.5	37.0	52.2	55.5	18.9	34.8	36.3	30.0	38.1	40.8	14.6	16.0	13.0	1.5	1.3	3.6
Complete 4 yrs.	—	—	0.3	1.3	2.6	2.4	0.3	0.1	0.3	19.7	36.8	47.9	6.5	19.8	31.3	10.0	18.5	25.9	2.9	5.4	6.1	0.6	0.9	0.7
Region:																								
Northeast	—	—	0.9	0.6	2.3	3.1	0.6	0.1	0.4	23.3	37.8	54.3	8.0	19.9	33.9	11.4	18.1	30.3	3.7	4.9	5.4	0.9	1.0	3.1
North Central	—	—	0.2	1.5	1.5	3.4	0.6	0.3	0.0	21.2	41.0	54.5	8.2	24.0	39.2	12.0	24.2	35.9	4.0	7.0	9.9	0.9	0.7	0.6
South	—	—	0.9	2.0	3.8	2.8	0.3	0.1	0.3	22.8	38.3	45.9	8.1	21.5	28.8	14.3	23.5	25.9	5.4	9.6	8.5	0.8	1.0	0.9
West	—	—	0.0	2.2	3.7	2.7	0.2	0.5	0.8	18.1	38.2	44.9	6.0	21.2	28.8	9.3	15.0	25.2	2.1	3.0	6.2	0.3	1.1	1.5
Population Density:																								
Large MSA	—	—	0.4	1.1	2.6	4.0	0.8	0.1	0.2	19.4	37.6	49.7	6.3	19.5	30.6	9.3	17.3	27.3	2.4	4.1	4.4	0.7	1.1	1.5
Other MSA	—	—	0.4	2.0	2.3	2.5	0.3	0.3	0.5	21.5	38.3	49.6	7.9	21.6	31.7	11.6	20.5	28.2	3.5	5.7	8.0	0.7	0.8	1.5
Non-MSA	—	—	0.8	1.6	4.2	2.6	0.2	0.3	0.2	24.1	41.8	50.0	8.9	25.3	36.7	16.9	27.6	34.3	7.0	12.5	11.5	0.9	1.1	0.8
Parental Education:[e]																								
1.0-2.0 (Low)	—	—	0.0	1.4	2.7	2.1	0.7	1.3	2.8	28.5	38.6	42.9	12.1	22.0	22.2	20.3	22.5	24.8	5.0	6.9	6.3	1.0	0.5	1.1
2.5-3.0	—	—	0.7	2.5	3.3	3.5	0.1	0.3	0.2	27.0	41.4	49.0	9.7	22.6	32.2	16.4	25.7	31.5	5.4	8.9	7.5	0.7	1.0	1.4
3.5-4.0	—	—	0.0	1.6	3.3	2.8	0.8	0.1	0.0	23.3	41.0	51.4	8.7	22.8	32.0	12.6	21.1	30.3	3.7	7.1	8.6	0.7	1.0	1.4
4.5-5.0	—	—	0.4	1.7	2.8	3.1	0.5	0.0	0.3	17.2	37.0	51.5	5.7	21.4	36.1	8.3	18.9	29.3	2.5	5.7	6.2	0.7	0.9	1.2
5.5-6.0 (High)	—	—	0.7	0.6	1.6	1.7	0.0	0.0	0.0	16.4	37.1	49.5	4.6	21.5	33.6	6.9	17.1	25.0	4.2	4.8	10.3	0.9	1.2	0.8

NOTES: '—' indicates data not available. '*' indicates less than .05 percent but greater than 0 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 8th and 10th grades only: Data based on two of four forms; N is one-third of N indicated. For 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.
[b] Only drug use not under a doctor's orders is included here.
[c] 12th grade only: Data based on two of six forms; N is two-sixths of N indicated.
[d] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated. 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.
[e] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

TABLE 4-8

Thirty-Day Prevalence of Daily Use of Marijuana, Alcohol, and Tobacco by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

				Percentage who used daily in last thirty days																	
				Marijuana			Alcohol						Cigarettes						Smokeless Tobacco[a]		
	Approx. N[b]			Daily			Daily			5+ drinks[c]			One or more daily			Half-pack or more daily			Daily		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	*16,200*	*14,000*	*12,800*	1.3	4.5	5.8	0.9	1.9	3.6	13.2	24.9	29.7	5.5	12.2	19.0	2.3	5.5	10.3	1.2	2.2	2.8
Gender:																					
Male	*7,500*	*6,600*	*5,800*	2.0	6.4	7.9	1.2	2.9	5.5	13.7	28.6	36.0	5.9	12.4	18.4	2.6	6.0	10.2	2.5	4.5	5.6
Female	*8,300*	*7,100*	*6,500*	0.6	2.6	3.6	0.6	0.9	1.7	12.4	21.4	23.7	4.9	11.9	18.9	2.0	5.1	10.2	0.1	0.3	0.3
College Plans:																					
None or under 4 yrs.	*1,600*	*1,900*	*2,500*	5.1	11.7	8.8	2.8	4.6	5.3	29.6	40.2	35.9	17.7	27.3	30.1	9.8	16.0	19.3	4.5	6.6	4.7
Complete 4 yrs.	*14,100*	*11,900*	*9,600*	0.8	3.3	4.4	0.6	1.4	2.9	11.2	22.4	27.8	3.9	9.6	15.5	1.4	3.8	7.6	0.9	1.5	2.1
Region:																					
Northeast	*2,900*	*2,700*	*2,400*	1.4	3.8	7.7	0.8	1.6	3.1	12.6	22.7	31.8	6.1	11.0	21.9	2.6	5.0	12.3	0.7	1.1	1.5
North Central	*4,000*	*4,100*	*3,700*	1.3	4.1	6.8	0.7	1.6	4.5	12.5	26.7	34.5	6.4	13.2	25.2	3.1	6.0	14.8	1.1	2.1	2.8
South	*5,900*	*5,000*	*4,100*	1.5	4.5	3.9	1.2	1.9	3.5	15.3	24.2	26.6	6.1	14.3	15.5	2.7	6.5	7.6	2.1	3.6	3.8
West	*3,400*	*2,200*	*2,600*	0.9	6.2	5.9	0.6	2.4	3.0	11.0	25.7	26.0	2.6	7.0	13.4	0.7	3.3	6.6	0.1	0.9	2.6
Population Density:																					
Large MSA	*4,700*	*3,900*	*3,800*	0.8	4.4	5.9	0.5	1.8	3.6	11.1	22.6	29.0	4.1	9.6	17.4	1.5	4.8	9.4	0.3	0.8	1.4
Other MSA	*7,500*	*6,700*	*5,800*	1.6	4.4	5.7	0.9	1.6	3.6	13.2	23.9	29.0	5.4	11.6	17.5	2.1	5.0	9.4	0.8	1.7	2.6
Non-MSA	*4,000*	*3,400*	*3,200*	1.4	4.8	6.0	1.3	2.5	3.7	15.9	29.5	31.9	7.2	16.3	23.9	3.9	7.5	13.3	2.9	5.0	5.0
Parental Education:[d]																					
1.0-2.0 (Low)	*1,300*	*1,200*	*1,000*	2.0	6.0	5.5	1.7	2.9	3.5	21.0	26.3	24.8	11.1	12.9	16.4	5.2	7.6	10.8	1.8	3.8	4.0
2.5-3.0	*3,400*	*3,200*	*2,900*	1.9	5.3	5.8	1.2	1.9	3.4	16.6	27.4	30.2	7.5	16.2	21.9	3.6	8.3	12.5	2.1	3.2	3.2
3.5-4.0	*4,000*	*3,700*	*3,600*	1.3	4.7	5.7	0.5	1.5	3.4	13.9	25.6	30.3	5.1	12.2	19.9	2.0	5.3	10.6	0.3	1.5	2.8
4.5-5.0	*3,900*	*3,400*	*3,200*	0.8	3.8	5.4	0.6	1.7	3.3	9.8	23.4	30.9	3.0	9.7	17.9	0.9	3.9	9.2	0.5	1.9	2.7
5.5-6.0 (High)	*2,100*	*1,800*	*1,600*	0.5	3.3	4.4	0.7	1.7	3.9	8.1	23.1	28.6	3.1	8.3	13.4	1.4	2.6	6.2	1.7	1.9	2.5

NOTE: '*' indicates less than .05 percent but greater than 0 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated. 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.

[b] Subgroup Ns may vary depending on the number of forms in which the use of each drug was asked about.

[c] This measure refers to use of five or more drinks in a row in the last two weeks.

[d] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

TABLE 4-9

Racial/Ethnic Comparisons of Lifetime, Annual, Thirty-Day, and Daily Prevalence of Use of Various Drugs Eighth, Tenth, and Twelfth Graders

NOTE: Percentages are based on 2000 and 2001 data combined.[a]

	Any Illicit Drug[b]			Any Illicit Drug Other Than Marijuana[b,c,d]			Marijuana			Inhalants[d,e]			Hallucinogens[c,d,e]			LSD			Hallucinogens Other Than LSD[c,d]			MDMA[f,g]			Cocaine		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Lifetime:																											
White	25.2	45.4	55.0	15.7	25.9	32.0	18.5	39.7	49.8	18.2	17.2	15.3	4.4	9.5	14.4	3.9	7.7	12.6	2.0	5.1	7.7	4.3	8.1	12.4	4.0	6.2	9.0
Black	26.3	43.2	46.7	8.0	8.0	10.2	22.2	40.1	43.5	11.6	6.6	6.2	1.2	1.7	2.4	1.0	1.4	1.9	0.5	1.2	1.3	2.0	3.1	3.1	1.7	1.2	1.8
Hispanic	34.3	50.7	57.4	20.0	23.5	29.7	26.2	44.9	52.0	20.2	16.4	13.0	5.9	7.4	13.0	5.2	6.8	10.4	2.3	2.8	6.3	7.9	7.5	13.1	7.7	10.3	11.7
Annual:																											
White	19.0	37.6	43.1	10.6	19.2	23.0	14.7	32.9	38.5	10.1	7.9	5.9	2.9	6.6	9.0	2.6	5.2	7.5	1.4	3.4	4.7	3.2	6.0	9.6	2.5	3.9	5.5
Black	16.7	30.5	31.7	3.9	4.7	6.3	14.6	28.7	29.0	4.8	2.1	2.2	0.7	1.3	1.4	0.5	0.9	1.3	0.3	1.1	0.9	1.1	2.2	2.4	0.8	0.8	1.0
Hispanic	24.3	38.8	41.8	12.2	15.8	18.2	19.9	34.9	37.6	11.0	5.9	4.5	3.4	4.4	7.8	3.2	3.7	5.8	1.2	1.6	4.8	5.3	5.4	10.2	4.2	6.6	6.1
30-Day:																											
White	11.2	23.4	26.5	5.8	9.7	11.7	8.4	20.2	22.9	4.4	2.7	1.9	1.2	2.5	3.1	1.0	1.6	2.0	0.6	1.3	1.8	1.7	2.5	3.4	1.1	1.5	2.2
Black	9.6	17.6	18.7	2.0	2.9	2.8	8.1	16.7	17.0	2.4	1.2	1.7	0.6	0.6	0.7	0.3	0.5	0.6	0.3	0.5	0.3	1.0	1.5	1.4	0.4	0.4	0.8
Hispanic	15.0	23.3	25.3	6.4	7.2	11.2	12.6	20.5	22.1	4.9	2.7	1.9	1.6	1.9	4.2	1.5	1.6	1.9	0.7	0.6	2.5	2.4	2.7	4.3	2.3	2.7	2.9
Daily:																											
White	—	—	—	—	—	—	1.3	4.3	6.2	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black	—	—	—	—	—	—	1.1	3.6	4.1	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hispanic	—	—	—	—	—	—	1.6	4.2	5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTES: '—' indicates data not available.
The following sample sizes are based on the 2000 and 2001 surveys combined:

Sample Sizes:	8th Grade	10th Grade	12th Grade
White	*18,600*	*18,600*	*16,200*
Black	*4,500*	*2,800*	*3,100*
Hispanic	*4,100*	*3,400*	*2,600*

SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 4-9 (cont.)

Racial/Ethnic Comparisons of Lifetime, Annual, Thirty-Day, and Daily Prevalence of Use of Various Drugs Eighth, Tenth, and Twelfth Graders

NOTE: Percentages are based on 2000 and 2001 data combined.[a]

	Crack			Other Cocaine[h]			Heroin			Heroin with a Needle[d]			Heroin without a Needle[d]			Other Narcotics[i]			Amphetamines[j]			Meth-amphetamine[f,j]			Crystal Meth. (Ice)[j]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Lifetime:																											
White	2.8	3.2	3.8	3.1	5.5	8.3	1.7	2.0	2.3	1.0	0.9	0.6	1.2	1.6	2.2	—	—	12.6	11.3	18.5	18.4	4.8	7.0	8.1	—	—	4.1
Black	1.1	0.9	0.9	1.0	1.0	1.6	1.0	0.6	0.7	0.6	0.5	0.8	0.6	0.5	0.5	—	—	3.0	5.0	5.3	5.5	1.2	1.9	1.2	—	—	2.4
Hispanic	4.9	6.2	6.1	6.1	9.1	9.7	2.6	2.4	2.3	1.7	1.5	0.7	1.6	1.8	2.2	—	—	7.2	10.5	12.3	14.7	5.3	6.0	7.5	—	—	5.7
Annual:																											
White	1.7	1.8	2.2	1.8	3.4	5.0	1.0	1.2	1.3	0.6	0.4	0.2	0.7	1.0	1.3	—	—	8.5	7.8	13.4	12.6	3.1	4.1	4.6	—	—	2.4
Black	0.5	0.7	0.5	0.5	0.5	0.9	0.6	0.5	0.4	0.5	0.3	0.4	0.3	0.4	0.4	—	—	1.8	2.3	2.9	3.0	0.8	1.0	1.0	—	—	1.1
Hispanic	2.6	3.7	3.1	3.2	5.6	5.8	1.4	1.4	1.6	0.8	0.9	0.6	0.8	0.8	1.3	—	—	4.5	6.6	8.3	9.2	3.3	3.0	4.6	—	—	3.4
30-Day:																											
White	0.7	0.7	1.0	0.8	1.3	1.9	0.5	0.4	0.5	0.3	0.2	0.1	0.3	0.3	0.5	—	—	3.6	3.9	6.6	6.2	1.2	1.8	1.9	—	—	0.9
Black	0.3	0.3	0.4	0.3	0.4	0.7	0.4	0.2	0.4	0.4	0.2	0.3	0.2	0.1	0.3	—	—	0.7	1.2	1.4	1.5	0.2	0.6	0.5	—	—	0.9
Hispanic	1.3	1.6	2.0	1.9	2.4	2.5	0.8	0.6	1.0	0.5	0.4	0.4	0.4	0.3	0.9	—	—	2.0	3.1	3.6	4.7	1.0	1.5	2.9	—	—	1.5
Daily:																											
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

(Table continued on next page)

TABLE 4-9 (cont.)

Racial/Ethnic Comparisons of Lifetime, Annual, Thirty-Day, and Daily Prevalence of Use of Various Drugs Eighth, Tenth, and Twelfth Graders

NOTE: Percentages are based on 2000 and 2001 data combined.[a]

	Barbiturates[i]			Methaqualone[g,i]			Tranquilizers[c,d,i]			Alcohol			Been Drunk[j]			5+ Drinks[k]			Cigarettes			Smokeless Tobacco[c,g]			Steroids[j]		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th	8th	10th	12th
Lifetime:																											
White	—	—	10.4	—	—	1.0	4.5	9.8	11.0	51.3	72.2	82.4	25.6	52.6	67.9	—	—	—	38.6	56.0	65.5	14.5	22.6	27.9	3.1	3.6	3.2
Black	—	—	2.6	—	—	0.1	1.6	2.5	1.6	47.6	61.5	68.7	17.2	29.1	40.5	—	—	—	36.1	43.3	44.6	6.5	8.4	4.2	2.0	2.6	2.2
Hispanic	—	—	7.5	—	—	0.5	6.0	6.0	8.1	57.9	73.9	82.9	27.8	47.5	63.8	—	—	—	41.7	52.7	62.7	9.5	11.3	8.7	2.9	3.5	3.0
Annual:																											
White	—	—	7.0	—	—	0.4	3.0	7.0	7.7	44.1	67.3	77.0	19.2	45.3	58.8	—	—	—	—	—	—	—	—	—	1.8	2.3	2.1
Black	—	—	1.5	—	—	0.1	0.5	1.5	0.6	33.8	49.5	57.3	10.3	19.0	25.2	—	—	—	—	—	—	—	—	—	0.8	1.6	1.2
Hispanic	—	—	4.7	—	—	0.1	3.6	4.0	3.9	48.5	64.9	74.8	19.3	37.3	49.9	—	—	—	—	—	—	—	—	—	1.5	2.1	2.1
30-Day:																											
White	—	—	3.4	—	—	0.3	1.6	3.3	3.2	23.2	42.7	55.3	9.0	25.8	37.7	—	—	—	14.7	25.7	35.3	4.8	7.5	10.3	0.8	1.0	1.0
Black	—	—	0.6	—	—	0.1	0.3	0.9	0.3	15.0	25.3	29.4	4.0	9.5	12.0	—	—	—	8.2	11.1	13.3	2.2	3.2	1.2	0.4	0.6	0.6
Hispanic	—	—	2.1	—	—	0.0	1.8	2.4	1.8	25.7	40.2	48.9	7.8	18.7	25.5	—	—	—	13.0	16.8	23.8	3.3	4.0	3.2	0.6	1.1	0.8
Daily:																											
White	—	—	—	—	—	—	—	—	—	0.8	1.7	3.5	—	—	—	13.8	27.4	34.5	7.5	15.5	23.8	0.9	1.9	4.4	—	—	—
Black	—	—	—	—	—	—	—	—	—	0.4	1.4	1.6	—	—	—	9.0	12.6	11.8	2.8	5.2	7.5	0.3	0.6	0.2	—	—	—
Hispanic	—	—	—	—	—	—	—	—	—	1.2	2.6	4.1	—	—	—	17.6	27.7	28.4	5.0	7.4	12.0	0.6	0.8	0.6	—	—	—

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

[b] 8th and 10th grades only: The use of other narcotics and barbiturates has been excluded, because these younger respondents appear to overreport use (perhaps because they include the use of nonprescription drugs in their answers). 12th grade only: Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, or tranquilizers not under a doctor's orders.

[c] 8th and 10th grades only: Data based on two of four forms; N is one-half of N indicated.

[d] 12th grade only: Data based on three of six forms; N is one-half of N indicated.

[e] Unadjusted for known underreporting of certain drugs. See text for details.

[f] 8th and 10th grades only: Data based on one form; N is one-third of N indicated.

[g] 12th grade only: Data based on one of six forms; N is one-sixth of N indicated

[h] 12th grade only: Data based on four of six forms; N is four-sixths of N indicated.

[i] Only drug use which was not under a doctor's orders is included here.

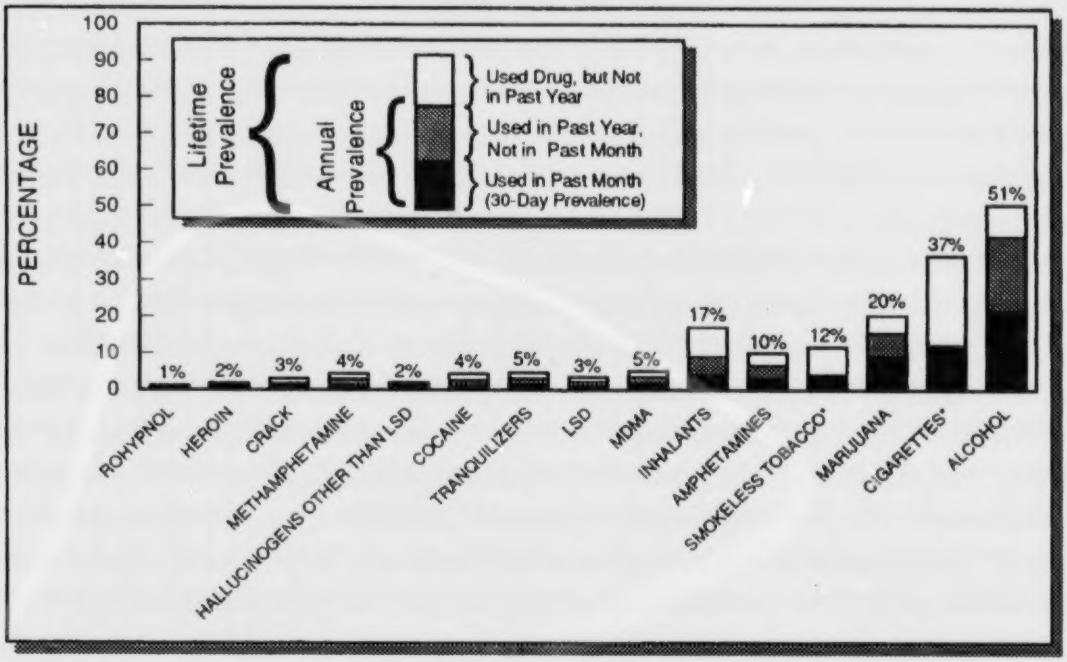
[j] 12th grade only: Data based on two of six forms; N is two-sixths of N indicated.

[k] This measure refers to having five or more drinks in a row in the last two weeks.

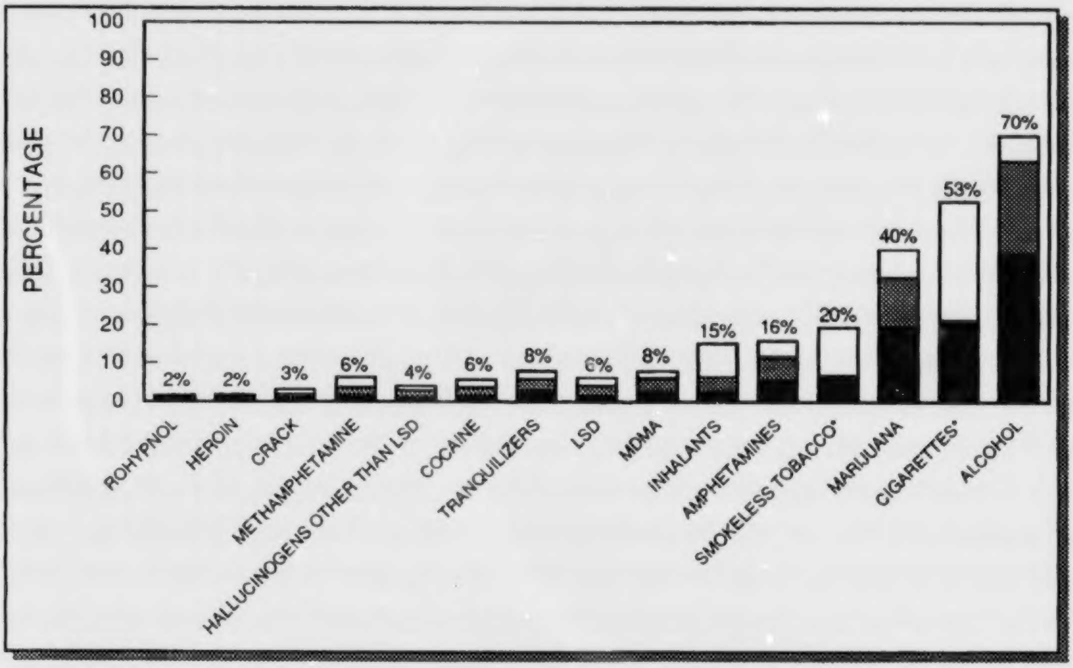
FIGURE 4-1

Prevalence and Recency of Use
Various Types of Drugs for Eighth, Tenth, and Twelfth Graders, 2001

Eighth Graders



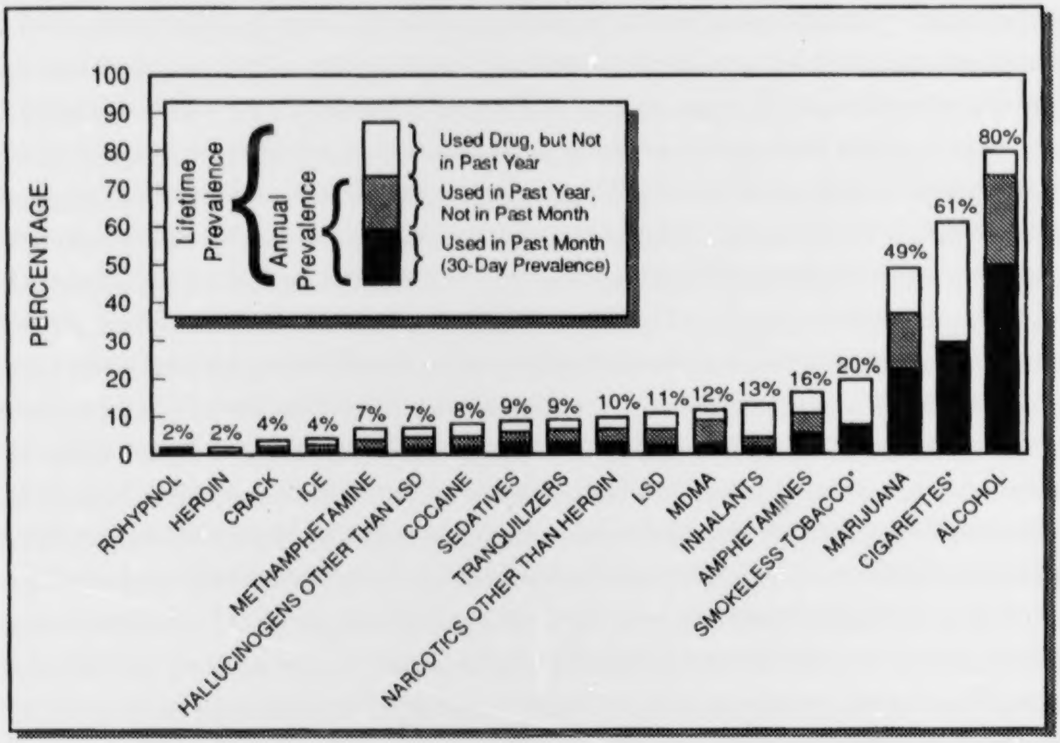
Tenth Graders



*Annual use not measured for cigarettes and smokeless tobacco.

FIGURE 4-1 (cont.)

Prevalence and Recency of Use
Various Types of Drugs for Eighth, Tenth, and Twelfth Graders, 2001



Twelfth Graders

*Annual use not measured for cigarettes and smokeless tobacco.

FIGURE 4-2

Thirty-Day Prevalence of Daily Use of Various Types of Drugs for Twelfth Graders, 2001

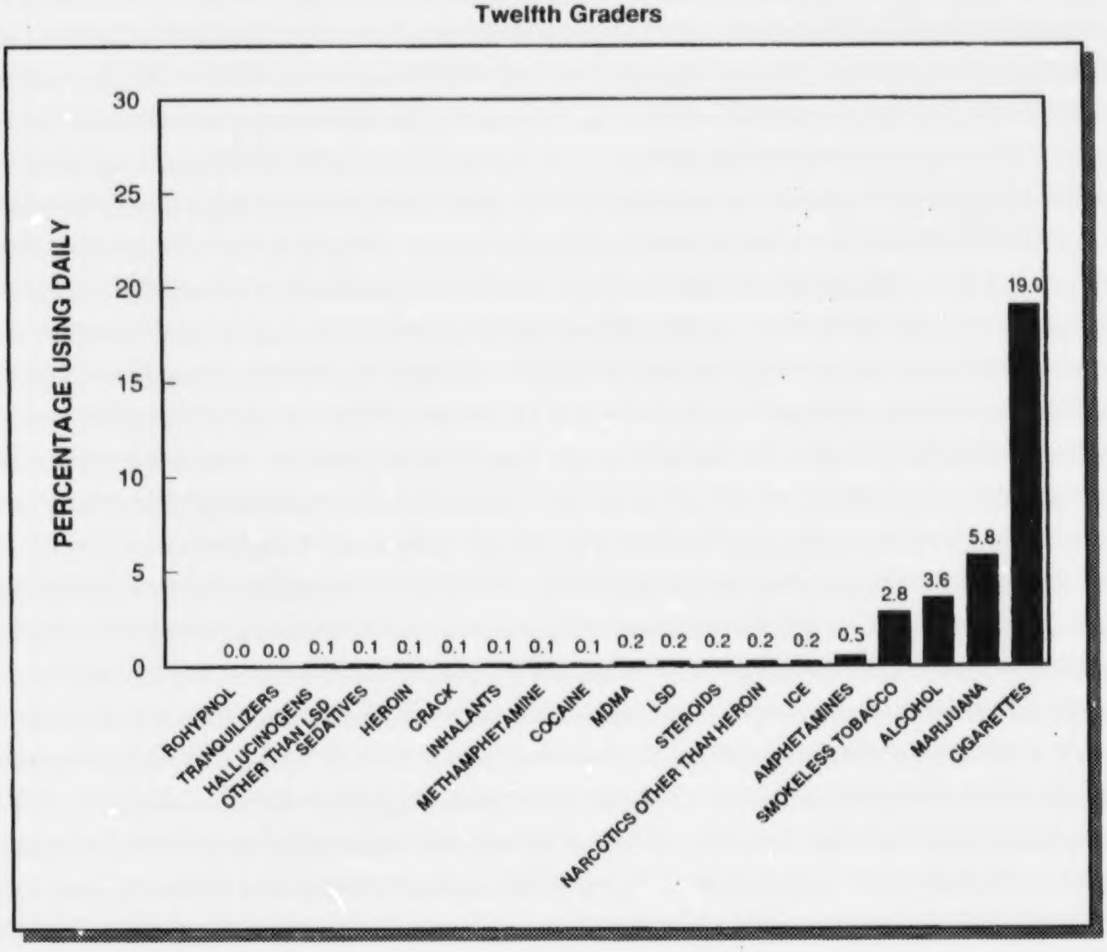
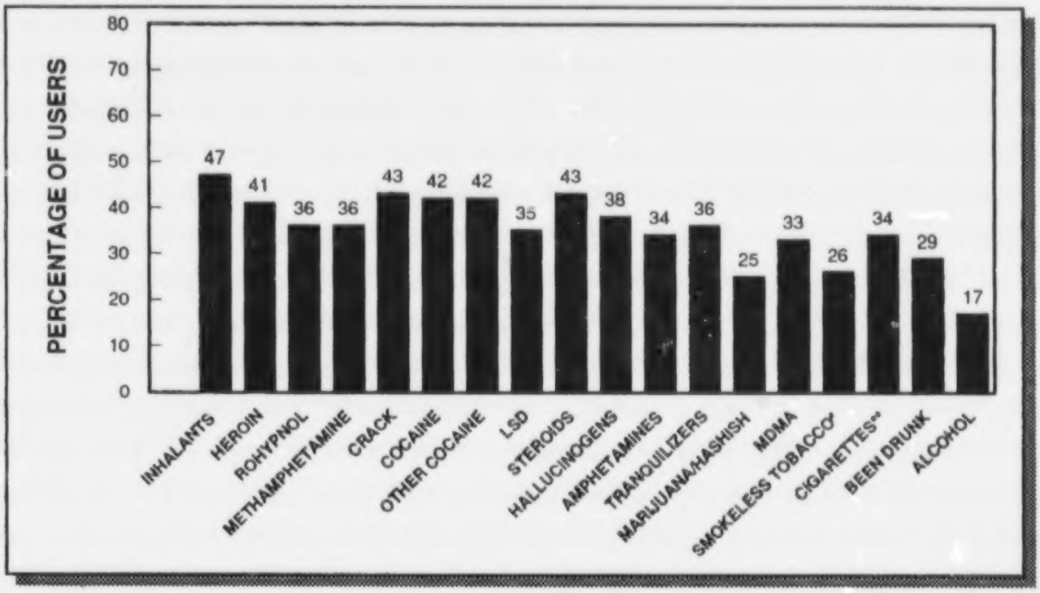


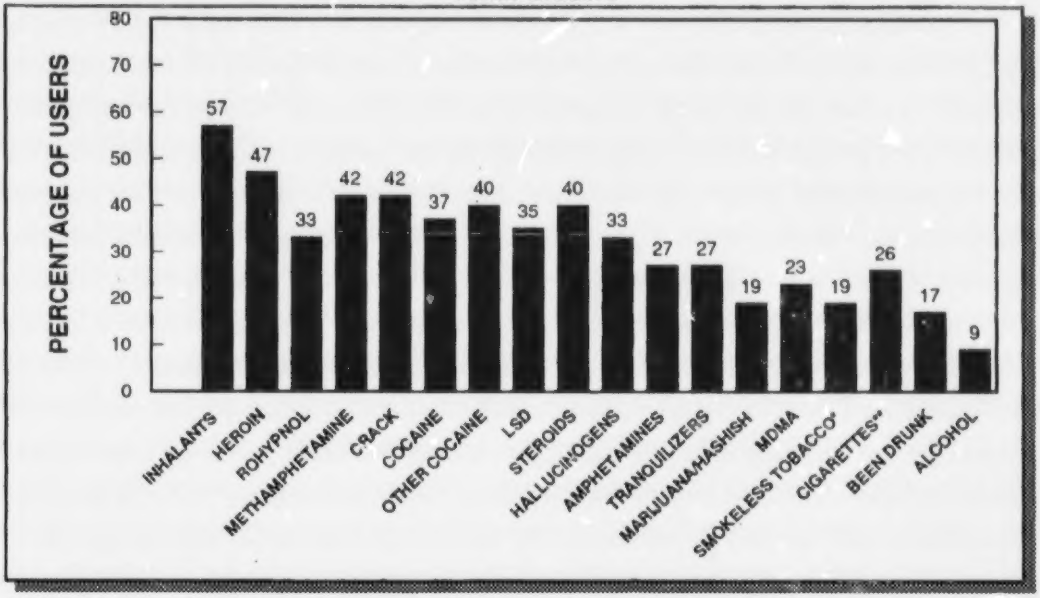
FIGURE 4-3

Noncontinuation Rates: Percentage of Lifetime Users Who Did Not Use in Past Year Eighth, Tenth, and Twelfth Graders, 2001

Eighth Graders



Tenth Graders

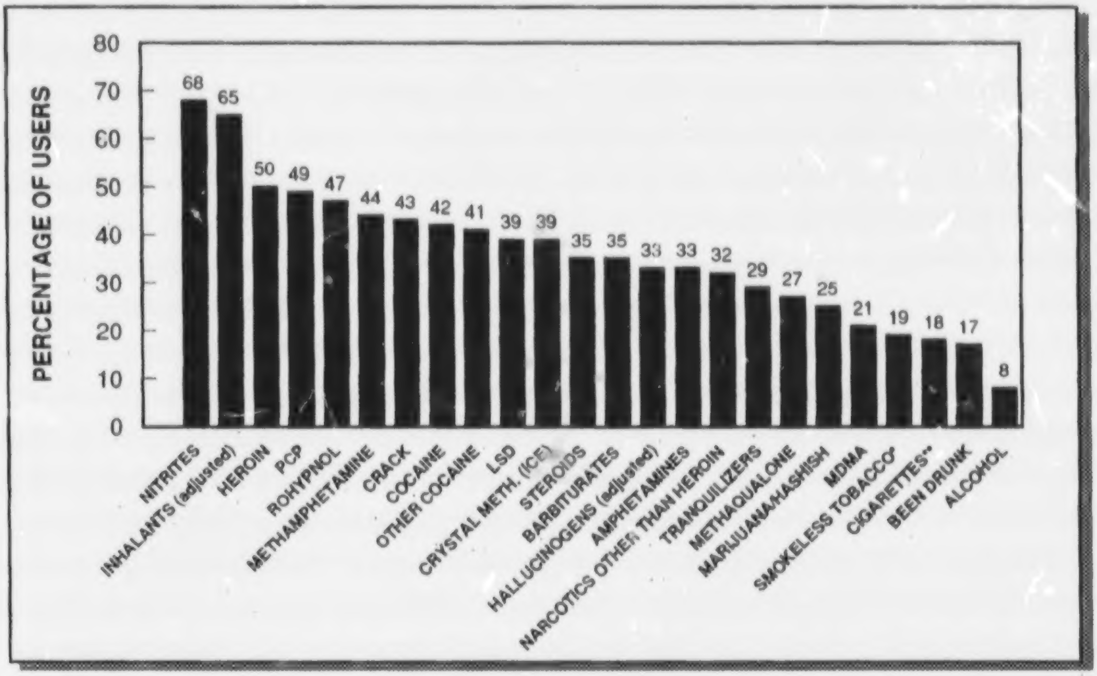


*Percent of regular smokeless tobacco users (ever) who did not use smokeless tobacco in the last thirty days.

**Percent of regular smokers (ever) who did not smoke at all in the last thirty days.

FIGURE 4-3 (cont.)

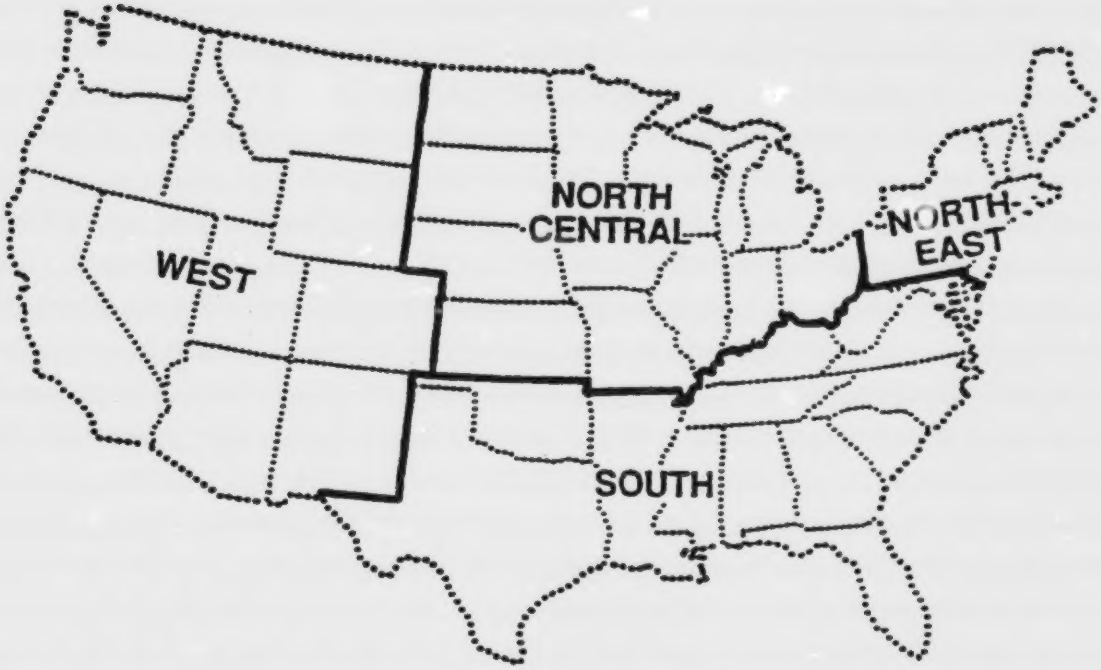
Noncontinuation Rates: Percentage of Lifetime Users Who Did Not Use in Past Year Eighth, Tenth, and Twelfth Graders, 2001



Twelfth Graders

*Percent of regular smokeless tobacco users (ever) who did not use smokeless tobacco in the last thirty days.
**Percent of regular smokers (ever) who did not smoke at all in the last thirty days.

FIGURE 4-4
States Included in the Four Regions of the Country


NORTH CENTRAL
NORTH-EAST
WEST
SOUTH

These are the four major regions of the country as defined by the U.S. Bureau of the Census.

Chapter 5

TRENDS IN DRUG USE

In this chapter we present trend results at grades 8, 10, and 12 on all of the drugs discussed in Chapter 4. Trends are presented and discussed first for twelfth graders, based on 27 years of data (1975 through 2001), then for eighth and tenth graders, based on 11 years of survey data (1991 through 2001). As in the previous chapter, the outcomes to be discussed include measures of lifetime use, use during the past year, use during the past month, and daily use.[36] Trends in noncontinuation rates among twelfth graders are examined next. Finally, there is a substantial section on the trends in use observed for the key demographic subgroups considered earlier: that is, those defined on the dimensions of gender, college plans, region of the country, population density, socioeconomic status, and racial/ethnic group. We will discuss the extent to which trends differ among the subgroups defined on these dimensions.

TRENDS IN PREVALENCE OF USE 1975-2001: TWELFTH GRADERS

Tables 5-1 through 5-4 give trends in lifetime, annual, 30-day, and current daily prevalence of use for all drugs, based on the past 27 graduating classes of high school seniors. Figures 5-1 through 5-4n provide graphic depictions of these trends.

- We know from other studies that in the late 1960s and early 1970s, prior to the launching of the Monitoring the Future (MTF) study in 1975, ***marijuana*** use rose quite sharply from relatively negligible levels in the youth population.[37] Based on the MTF data, the years 1978 and 1979 marked the crest of this long and dramatic rise in marijuana use among American high school seniors (and, for that matter, among young people generally). As Tables 5-2 through 5-3 and Figure 5-4a illustrate, annual and 30-day prevalence of marijuana use leveled between 1978 and 1979, following a steady rise in the preceding years. In 1980, both statistics dropped for the first time and continued to decline every year through 1992, except for a brief pause in 1985. Following this 12-year decline, annual use among twelfth graders rose sharply beginning in 1993. In all, it nearly doubled between 1992 and 1997, from 22% to 39%. Thirty-day use also rose significantly, doubling from the 1992 level of 12% to 24% in 1997. It was not until 1998 that these statistics turned around, although neither declined by a significant amount, and neither has declined any further since 1998.

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[36] The definitions of these behaviors remain the same as in the previous chapter. "Lifetime prevalence" refers to use on one or more occasions ever. "Annual prevalence" refers to use on one or more occasions in the 12 months preceding the survey, "monthly prevalence" (sometimes referred to as "current use" or "past 30-day use") refers to use on one or more occasions in the 30-day period preceding the survey, and for most drugs "daily use" refers to use on 20 or more occasions during the prior 30 days. (Daily use is defined differently for cigarettes and smokeless tobacco. See text.)

[37] National Commission on Marihuana and Drug Abuse. (1973). *Drug use in America: Problem in perspective.* Washington DC: U.S. Government Printing Office.

Lifetime prevalence of marijuana use first began to drop after 1980, though more gradually than annual or 30-day use.[38] It reached a low 12 years later, in 1992, when it was 33%, but by 1997, 50% of all seniors had tried marijuana before leaving high school. This is still somewhat below the peak level of 60% in 1980. Lifetime use remained level between 1997 and 2001.

Important changes in the attitudes and beliefs that young people hold in relation to marijuana have also occurred over this period, and these changes can account for much of the long-term decline in use, as well as the increase in use during much of the 1990s. (See Chapter 8 for a thorough discussion of the issue.)

- Of particular importance were the even sharper fluctuations that have occurred for active ***daily marijuana use*** (Table 5-4 and Figure 5-4m). Between 1975 and 1978 there was an almost two-fold increase in daily use. The proportion reporting daily use in the class of 1975 (6%) came as a shock to many; and then that proportion rose rapidly, so that by 1978 one in every nine high school seniors (11%) indicated that he or she was currently using the drug on a daily or nearly daily basis (defined as use on 20 or more occasions in the last 30 days). In 1979 this rapid and troublesome increase halted, followed by a rapid reversal. By 1992 the daily usage rate had dropped to 1.9%, well below the peak rate of 11% or even the 6% level first observed in 1975. As is discussed in Chapter 8, we attribute much of this dramatic decline to a very substantial increase in concerns about possible adverse effects from regular use and to a growing perception that peers would disapprove of marijuana use, particularly regular use. In 1993, for the first time in 15 years, daily marijuana use increased significantly, and it continued to increase significantly through 1997, reaching 5.8%—three times the rate in 1992. It then leveled through 2001. (See Chapter 10 for a discussion of cumulative daily marijuana use among high school seniors. It shows that the proportion that has used marijuana daily for a month or more at some time in the past is considerably higher than the proportion using marijuana daily in just the month immediately preceding the survey.)

- Until 1978, the proportion of seniors involved in ***any illicit drug*** use increased steadily, primarily because of the increase in marijuana use (see Figures 5-1 to 5-4a). About 54% of the classes of 1978 and 1979 reported taking at least one illicit drug during the prior 12 months, up from our first observation of 45% in the class of 1975. Between 1979 and 1984, however, the proportion who reported using any illicit drug during the prior year dropped by 1% to 3% annually until 1985, when there was a brief pause in the decline. In 1986 the decline resumed, with annual prevalence dropping significantly to 27% by 1992, exactly half the level observed in 1979. As with marijuana, the annual prevalence of using any illicit drug then increased substantially from 27% in 1992 to 42% in 1997, before leveling. (In 2001 the annual prevalence was 41%.)

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[38] Lifetime use declines more gradually than annual use or 30-day use because it reflects changes in initiation rates only, whereas annual and 30-day statistics reflect changes in both initiation rates *and* noncontinuation rates.

- As Table 5-1 and Figure 5-1 illustrate, between 1976 and 1981 there was a steady increase in the proportion of twelfth graders using any ***illicit drug other than marijuana***.[39] The annual prevalence of such behaviors (Table 5-2 and Figure 5-2), which rose by 9 percentage points between 1976 and 1981 (from 25% to 34%), then began a steady decline to 15% by 1992. After 1992, however, annual prevalence of use rose again, to 21% by 1997 before leveling; in 2001 annual prevalence was at 20%. The 30-day prevalence of use numbers exhibited the largest proportional drop—a 71% decline—from 22% in 1981 to 6% in 1992 (see Table 5-3 and Figure 5-3). In 1993, both annual and 30-day prevalence rates showed some increases, indicating that the turnaround in the early 1990s was not confined to marijuana use. Annual prevalence rose from 15% in 1992 to 21% in 1997. When compared to the larger increases seen in the any-illicit-use index during the 1990s, it is apparent that the increase in the use of illicit drugs other than marijuana, taken as a whole, was not as sharp in either absolute or proportional terms as the increase in marijuana use.

  Most of the earlier rise in the use of some ***illicit drug other than marijuana*** appeared to be due to the increasing popularity of cocaine with this age group between 1976 and 1979 and, then, to the increasing use of amphetamines between 1979 and 1981. As stated earlier in this volume, we believe that the upward shift in amphetamine use was exaggerated because some respondents included instances of using over-the-counter amphetamines in their reports of amphetamine use. Figures 5-1 through 5-3 show trends that, beginning in 1982, were based on questions reworded to encourage respondents to exclude the inappropriate reporting of these nonprescription amphetamines.

- Although the overall proportion using ***illicit drugs other than marijuana*** has changed gradually and steadily over the years, much greater fluctuations have occurred for specific drugs within this general class. This fact is important to recognize because it shows that, while the proportion willing to try any illicit drug may put outer limits on the amplitude of fluctuations for any single drug, the various subclasses of drugs must have important determinants specific to them. In particular, this includes variables such as perceived risks, peer normative attitudes, assumed benefits, and availability, as well as novelty. Such variables will be discussed in Chapters 8 and 9. (See Tables 5-1 through 5-3 for the long-term trends in twelfth graders' lifetime, annual, and monthly prevalence for each class of drugs. Figures 5-4a through 5-4n graph these trends for annual prevalence, along with the trends for eighth and tenth graders.) We will next discuss the trends in these specific classes of drugs.

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[39] Included under the definition of "any illicit drug other than marijuana" is any use of LSD, other hallucinogens, crack, other cocaine, heroin, and/or any use that is not under a doctor's orders of other narcotics, amphetamines, barbiturates, methaqualone (excluded since 1990), or tranquilizers. Not included are the following: alcohol, tobacco, and inhalants. Nitrites, PCP, and ice are included only to the extent the respondents included their use in the more general questions asking about inhalants, hallucinogens, or amphetamines, respectively.

- From 1976 to 1979, ***cocaine*** (Figure 5-4e) exhibited a substantial increase in popularity, with annual prevalence doubling in just three years from 6% in the class of 1976 to 12% in the class of 1979. Then, there was little or no further change observed in any of the cocaine prevalence statistics for seniors between 1979 and 1984, at least in the overall national statistics. (Subgroup differences in trends are discussed subsequently.) In 1985, we reported statistically significant increases in annual and monthly use, then a leveling again in 1986. Between 1986 and 1992, however, both indicators of use decreased by three-quarters or more: annual use decreased from 12.7% to 3.1% and monthly use decreased from 6.2% to 1.3%. (Reasons for this decrease are discussed in Chapter 8.) Annual prevalence then rebounded; in fact, it exactly doubled from 3.1% in 1992 to 6.2% in 1999, as did 30-day prevalence, from 1.3% to 2.6%. Finally, in 2000, the first significant decline in cocaine use in some years was observed, with annual prevalence among seniors dropping to 5.0%, which was approximately where it remained in 2001 (4.8%).

- Use of ***crack cocaine*** was first measured in 1986 by a single question contained in one questionnaire form and asked only of those respondents who had reported any use of cocaine in the past 12 months. It simply asked if crack was one of the forms of cocaine they had used. It was thus an estimate of the annual prevalence of crack use.

  However, prior to 1986, other indicators gathered routinely in the study showed some indirect evidence of the rapid spread of ***crack***. For example, we found that the proportion of all seniors reporting that they had smoked cocaine (as well as having used it in the past year) more than doubled between 1983 and 1986, from 2.4% to 5.7%. In the same period, the proportion of all seniors who said that they had both used cocaine during the prior year and at some time been unable to stop using it when they tried to stop doubled (from 0.4% to 0.8%). In addition, between 1984 and 1986 the proportion of seniors reporting active daily use of cocaine doubled (from 0.2% to 0.4%). We think it likely that the rapid advent of crack use during this period was reflected in all of these changes.

- In 1987 questions about ***crack*** use were introduced into two questionnaire forms, using our standard set of three questions that ask separately about frequency of use in lifetime, past 12 months, and past 30 days. These were added subsequently to all questionnaire forms beginning in 1990.

  Between 1986 and 1991, annual ***crack*** prevalence of use declined from 4.1% to 1.5%, or by about 60% (see Figure 5-4e). It then leveled for a couple of years. After 1993, annual prevalence rose steadily from 1.5% to 2.7% in 1999, before finally declining significantly in 2000 to 2.2%, where it remained in 2001 (2.1%).

It is important to note that ***crack*** use may be disproportionately located in the out-of-school population relative to most other drugs. In general, it would seem likely that the trends there would parallel those seen among high school seniors, who represent the majority of that age population, but there could be exceptions.

- Like cocaine use, ***inhalant*** use rose steadily, but more slowly, in the late 1970s (see Figure 5-4b). Annual prevalence (unadjusted for the omission of nitrite inhalants) rose from 3.0% in 1976 to peak at 5.4% in 1979. Starting in 1979, when separate questions were introduced to measure the rising use of nitrite inhalants, an adjustment was introduced into the overall inhalant use measure to correct for the underreporting of nitrite inhalants that we had determined existed. Between 1979 and 1983, we reported some overall decline in this adjusted version—in part due to a substantial drop in the use of amyl and butyl nitrites, for which annual prevalence declined from 6.5% in 1979 to 3.6% in 1983. Both the inhalant adjusted and unadjusted measures increased modestly between 1983 and 1986, with annual use of inhalants (adjusted) increasing from 6.2% in 1983 to 8.9% in 1986 and that of nitrites increasing less, from 3.6% to 4.7%.

  After 1986, there was a steep decline in annual ***nitrite*** use (from 4.7% to 0.5% in 1992) but only a modest decline in overall inhalant use (adjusted), with annual prevalence of use falling from 8.9% in 1986 to 6.4% in 1992, before rising again to 8.5% by 1996. The gradual convergence of the unadjusted and adjusted inhalant prevalence rates (seen in Figure 5-4b) suggests that the number of seniors who used nitrites but did not report themselves as inhalant users on the general inhalant use question diminished considerably by 1992, as would be expected in light of the overall decline in nitrite use. From 1992 to 1996, however, the annual prevalence of nitrite use rose slightly, from 0.5% to 1.6% in 1996—a large proportional change, but on a very low base. Starting in 1997, nitrite use began a gradual decline and stands at 0.6% in 2001.

  This unusual pattern of change, in which inhalant use unadjusted for nitrites rose over much of the life of the study while the version adjusted for nitrites stayed fairly level over most of the life of the study (Figure 5-4b), is worthy of further consideration. Essentially, ***inhalants other than nitrites*** rose in use, but after 1979 the increase was largely offset or masked in the adjusted inhalants measure by the sharp decline in the use of nitrites. In the class of 1976, when the inhalant questions were first introduced, 10.3% indicated any lifetime use (unadjusted), versus 17.4% in 1995—a substantial increase. Annual prevalence (unadjusted) more than doubled over the same interval, from 3.0% to 8.0%. Since 1995, annual prevalence has declined steadily, from 8.0% in 1995 to 4.5% in 2001, including a significant decline in 2001.

- ***Amphetamine*** use remained relatively unchanged between 1975 and 1978, began to increase in 1979, and then increased sharply between 1979 and 1981 (Figure 5-

4a). From 1976 through 1981, reported annual prevalence rose by 10 percentage points (from 16% to 26%) and daily use tripled, from 0.4% to 1.2%. As stated earlier, we think these increases were somewhat exaggerated in the 1980 and 1981 surveys, in particular, by respondents who included non-amphetamine over-the-counter diet and stay-awake pills, as well as "look-alike" and "sound-alike" pills in their answers. In 1982, we added new versions of the amphetamine use questions, which were more explicit in instructing respondents not to include such nonprescription pills. (These were added to only three of the five forms of the questionnaire being used; the amphetamine questions were left unchanged in the other two forms until 1984.) Between 1981 and 1982, prevalence rates dropped slightly as a result of this methodological change. In all tables and figures, data for 1975 through 1981 are based on the unchanged questions, providing comparable data across time for longer-term trend estimates; data since 1982 are based on the revised questions, providing our best assessments of current prevalence and recent trends in true amphetamine use.[40]

In 1982 and 1983, the two years for which both adjusted and unadjusted statistics are available, the unadjusted data showed a modest amount of overreporting (see Figure 5-4a). Both statistics suggest that a downturn in the use of ***amphetamines*** began in 1982 and continued for a decade. For example, between 1982 and 1992 the annual prevalence for amphetamines (revised) fell by nearly two-thirds from 20% to 7%. Current use and current daily use both fell by more than two-thirds. As with a number of other drugs, the trend lines veered upwards after 1992. Annual prevalence rose significantly from 7% in 1992 to 10% by 1997, before leveling from 1998 through 2001.

Table E-2 in Appendix E gives the 26-year trends for many of the ***specific amphetamines***.[41] The data are based on a set of branching questions asked in one questionnaire form of respondents who indicate any amphetamine use; the table shows that ritalin and crystal methamphetamine have come to predominate the class in recent years. The non-medical use of ***ritalin*** grew from 0.1% in 1992 to 2.8% in 1997 and 1998. Since then, it has declined slightly to 2.4% in 2001. A new question in 2001 that asks about ritalin use without using a branching question format yields a higher annual prevalence for this drug of 5.1%. While it is clear that the branching question yielded a lower absolute prevalence level, we believe it likely that the trend story generated by that question over the years has been an accurate one. (Crystal methamphetamine is discussed separately later.)

The three most widely used amphetamine-type stimulants at the beginning of the study were ***Benzedrine***, ***Methedrine*** and ***Dexedrine***, which had annual prevalence rates in 1976 of 3.5%, 3.4%, and 2.9%, respectively. Benzedrine use peaked in 1977 at 4.1%, Methedrine in 1981 at 5.6%, and Dexedrine in 1981 at 5.1%. (Recall that 1981 was the peak year for amphetamine use overall.) The use of all three drugs dropped to much lower rates of use by 1987 and to negligible rates by 1991, with little change since. It has always been the case that a significant portion of the respondents indicating amphetamine use have indicated that they do not know the names of ones that they used, or answered "other" on the predefined list (see Table E-2).

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[40] We think the unadjusted estimates for the earliest years of the survey were probably little affected by the improper inclusion of nonprescription amphetamines, since sales of the latter did not burgeon until after the 1979 data collection.

[41] These more detailed questions about specific drugs within a class are asked only of seniors. They are contained in a single questionnaire form and are asked in a branching format, wherein a respondent must first indicate that he or she used the general class of drugs (e.g., amphetamines) in the past 12 months before being branched to the more detailed questions about which specific drugs were used in the prior 12 months.

Because of growing concern about the drug, in 1990 a full set of prevalence questions was added about twelfth graders' use of ***ice***, a crystallized form of methamphetamine that can be smoked much like crack. (See Tables 5-1 through 5-4.) Despite the widespread concern at the time that an epidemic of ice use would develop, it has not made much of an inroad into the national population of seniors, quite possibly because the dangerous reputation of crack "rubbed off" on it. Annual prevalence of use held at about 1.3% from 1990, the first measurement point, through 1992, and then use began to rise gradually to 2.8% by 1996. This over twofold increase gave ice a slightly higher prevalence rate than crack had (2.1%) in 1996. After 1998, ice use declined slightly, with annual prevalence in 2001 at 2.5%.

- A general measure of the use of ***methamphetamine*** (as opposed to crystal methamphetamine) was introduced in 1999, and an annual prevalence of 4.7% was observed. Use has declined slightly since then to 3.9% in 2001.

- The sustained, gradual decline in ***sedative*** use (Figure 5-4c) between 1975 and 1979 halted in 1980 and 1981. Annual prevalence, which had dropped steadily from 12% in 1975 to 10% in 1979, increased slightly to 11% by 1981. This increase probably reflects the increase then occurring in one of the classes of sedatives, methaqualone (discussed next). The longer-term decline resumed again in 1982, and over the next decade annual prevalence dropped all the way down to 3%, a decline of three-quarters from the peak level in 1975. After 1992, along with a number of other drugs, an increase began in the annual measure, which doubled to 6% by 1998, before leveling.

The overall trends for sedatives mask differential trends occurring for the two components of the measure, as illustrated in Figure 5-4c. ***Barbiturate*** use declined steadily between 1975 and 1987 before leveling off. By 1992, annual prevalence of use (3%) was less than one-third of the 1975 level (11%). It then rose back steadily to reach 6% by 2000 (5.7% in 2001). ***Methaqualone*** use, on the other hand, rose sharply from 1978 until 1981. In fact, it was the only drug other than amphetamines that was still rising in 1981. But in 1982, the use of methaqualone also began to decline, helping to account for the overall sedative category resuming its decline that year. Annual prevalence plummeted from 7.6% in 1982 to 0.2% in 1993; it then inched up a bit in the 1990s to 1.1% in

1996, where it remained in 1999. In 2001 it stood at 0.8%, a fraction of its peak level observed in 1981 (8%). Because of the very low prevalence rates, methaqualone questions were dropped from five of the six questionnaire forms, beginning in 1990. Therefore, since 1990 the overall sedative data have been based on the six-form barbiturate data adjusted by the one-form methaqualone data.

- The rising usage statistics for ***tranquilizers*** (Figure 5-4b) peaked in 1977—near the beginning of the study—probably following a considerable period of increase. They then showed a long, steady decline for 15 years, through 1992. Lifetime prevalence of use dropped by two-thirds (from 18% in 1977 to 6% in 1992), annual prevalence by three-fourths (from 11% to 3%), and 30-day prevalence by more than three-fourths (from 5% to 1%). Following this significant decline, use began to rise after 1992, reaching 6.5% in 2001.

- The prevalence of ***heroin*** use dropped rather steadily between 1975 and 1979 (Table 5-2 and Figure 5-4f). Lifetime prevalence dropped by exactly half, from 2.2% in 1975 to 1.1% in 1979, and annual prevalence also dropped by half, from 1.0% in 1975 to 0.5% in 1979. This decline halted in 1979 and the statistics remained almost constant for a decade and a half. In 1994, all prevalence rates remained similar to those in 1979, with very little change in the intervening years. However, in 1995 a sharp (and statistically significant) increase occurred, with annual and 30-day prevalence rates roughly doubling, to 1.1% and 0.6%, respectively. (As discussed in the previous chapter—see also Table 5-6 in this chapter—we believe that the advent of noninjectable forms of heroin has played a role in this increase.) However, there was no further increase in annual or 30-day prevalence of use rates from 1995 through 1999 (Tables 5-2 and 5-3). Nor was there any increase during this period in the use of heroin by injection or by other means (Table 5-6). The increase in heroin use was recognized fairly quickly and gave rise to some ameliorative actions, including an anti-heroin campaign by the Partnership for a Drug-Free America. This response may well explain the unusually quick leveling in use after one year of sharp increase. However, in 2000 there was a significant increase in heroin use among twelfth graders (up to 1.5% from 1.1% in 1999), due entirely to a significant increase in use without a needle (from 1.0% to 1.6%). As we will see, there was actually a significant drop in heroin use among eighth graders in 2000 at the same time that use rose among twelfth graders. But in 2001, there finally was a significant decline (to 0.9%) among twelfth graders.

  The questions on heroin use were elaborated beginning in 1995 to differentiate use with and without a needle. As can be seen in Table 5-6, use without a needle has accounted for much of the heroin use among seniors since 1995. About one-fourth of the users have used heroin both ways, but of the remainder, three to five times as many have used heroin without a needle as have used with a needle. (The ratios are different in the lower grades, as will be discussed later.)

- For the first 13 years of the study, the use of ***narcotics other than heroin*** remained quite stable, with annual prevalence fluctuating between 5.1% and 6.4% (see Figure 5-4g). After 1987, there was a gradual decline in annual prevalence from 5.3% in 1987 to 3.3% by 1992. As with so many of the drugs, use rose gradually, but steadily, from 1992 through 2000, more than doubling to 7.0% by 2000—the highest level seen since the study began. The rate remained at a high level (6.7%) in 2001.

- Table E-4 in Appendix E shows many of the specific ***narcotic*** (or opiate-type) drugs that make up this class and how each of them has trended over the past 26 years. It shows some of the drugs responsible for the considerable rise in the overall class during the 1990s: codeine, the annual prevalence of which rose from a low point of 1.0% in 1995 to 2.8% by 2001; opium, which rose from a low of 0.4% in 1993 to 2.1% in 2001; and morphine, which rose from a low of 0.2% in 1993 to 1.4% in 2001. The use of methadone and Demerol also rose during the 1990s, though their annual prevalence rates remain lower than the other three drugs. (Some additional drugs have been added to this list in the 2002 questionnaire.)

- ***Hallucinogen*** use (unadjusted for underreporting of PCP) declined some in the mid-1970s (Figure 5-4d) from an annual prevalence of 11.2% in 1975 to 9.6% in 1978. This may well have been the tail end of a longer period of decline precipitated by rising concerns about the adverse effects of hallucinogens—particularly LSD—and especially concerns about possible brain and genetic damage. The use of hallucinogens (unadjusted for PCP use) then leveled for several years before beginning another sustained decline. The first hallucinogen figures adjusted for the underreporting of PCP use were available in 1979. Between then and 1984, annual prevalence of hallucinogens (adjusted) declined steadily from 11.8% to 7.3%. The rate remained fairly level through 1986, dropped a little more through 1988, and then remained level again through 1992. In 1993 this pattern of irregular declines ended, as annual prevalence rose significantly from 6.2% in 1989 to 10.7% by 1996. Since then use has fallen off a bit, to 9% in 2001.

- ***LSD***, one of the major drugs constituting the hallucinogen class, showed a modest decline from 1975 to 1977, followed by considerable stability through 1981 (Figure 5-4d). Between 1981 and 1985, there was a second period of gradual decline, with annual prevalence of use falling from 6.5% to 4.4%. However, after 1985, annual prevalence began to rise gradually to 5.6% in 1992. The rate of increase accelerated in 1993, as annual prevalence jumped to 6.8%. The increase continued through 1996, with annual prevalence reaching 8.8%, double the low point in 1985. Since 1996, annual prevalence has declined some and was at 6.6% in 2001.

- Prevalence of use statistics for the specific hallucinogen ***PCP*** showed a very sharp decline after 1979, when the use of this drug was first measured (see Figure 5-4d). Annual prevalence dropped from 7% in the class of 1979 to 2.2% in the class of 1982. After leveling for a few years, it dropped further to 1.3% by 1987, which is about where it remained until 1993. The speed with which this drug fell from popularity strongly suggests that it achieved a reputation as a dangerous drug very quickly. From 1993 to 1996, annual use increased, as did the use of most of the other illicit drugs, to 2.6% by 1996. Also, as with most other drugs, the increase halted in 1997. Annual prevalence for twelfth graders was 1.8% in 2001.

- Table E-1 in Appendix E shows the 26-year trends for a number of specific ***hallucinogenic*** drugs. It shows that in the early years of the study, mescaline, concentrated THC, peyote, and PCP were far more widely used than they are today. Concentrated THC was at a peak annual prevalence of 5.7% in 1977, but fell to about 1% by 1984 and has varied relatively little since. (It is at 1.3% in 2001.) Mescaline was at a 5% peak from 1976 through 1978 (and possibly earlier) but fell below 1% by 1988 and has varied rather little since. (Annual prevalence is 0.9% in 2001.) Peyote use was at 1.8% annual prevalence at the first measurement, in 1976, and fell to 0.6% by 1982, which is about where it has remained in the years since (0.9% in 2001).

- The drug ***ecstasy*** (***MDMA***) had been in the surveys of young adults for several years before we added it in 1996 to the questionnaires given to secondary school students. We had been concerned about the possibility of stimulating an interest in a previously little known drug among secondary school students—particularly given its alluring name. In 1996, we found that 6% of the seniors had tried the drug and that 4.6% reported use in the prior twelve months. Over the next two years annual prevalence fell to 3.6% in 1998, but in 1999 it increased sharply to 5.6% and then rose sharply again in 2000 to 8.2%. The rate of increase slowed some in 2001, when use reached 9.2%. In Chapter 8 we will see that perceived risk for ecstasy jumped substantially in 2001, likely helping to explain the deceleration in the rise in use. However, we know from other analyses that it was still diffusing to more communities in 2001, which would help to explain its continued rise. (As we will see in Volume II, this dramatic increase over the past three years was not confined just to teenagers.) The reported availability of ecstasy has risen substantially in recent years, quite probably playing a role in its sudden resurgence. (See Chapter 9.) This drug has been particularly popular at "raves" and dance clubs, making it one of the so-called "club drugs."

- Another "club drug," ***Rohypnol***, was added to the study in 1996, in part because of the extensive publicity it received as a "date rape" drug. The annual prevalence rate on this drug has remained low (between 0.8% and 1.4%) in the years since, no doubt in part due to the early and extensive negative publicity it received. The peak prevalence of 1.4% occurred in 1998, and use was down to 0.9% by 2001.

- The use of ***steroids***, specifically anabolic steroids, has been included in the study since 1989. The question is preceded by an introduction that states, "Steroids, or anabolic steroids, are sometimes prescribed by doctors to promote healing from certain types of injuries. Some athletes, and others, have used them to try to increase muscle development." The question then asks, "On how many occasions have you taken steroids on your own—that is, without a doctor telling you to take them?" Since it does not state that they must be prescription-controlled substances, we think it likely that some respondents include over-the-counter compounds like androstenedione in their answers, though some special analyses presented in Chapter 4 indicate that it was a minority of self-reported steroid users who also reported using androstenedione in the same year (26%, 28%, 41% in grades 8,10, and 12). Among twelfth graders, annual prevalence stood at 1.9% in 1989, fell to a low of 1.1% by 1992, and then rose gradually during the 1990s to 1.8% by 1999. Use leveled in grade 12 at 1.7% in 2000 but rose significantly to 2.4% in 2001.

- As these varied patterns of use show, the overall proportion of seniors using ***any illicit drugs other than marijuana*** in their lifetime has changed over the years, but the mix of drugs they used has changed even more. A number of drug classes showed dramatic declines (particularly in the 1980s), some showed substantial increases, and some remained fairly stable. Further, the periods in which they either increased or declined varied considerably for the different drugs, although between 1992 and 1996 the use of many drugs increased and by 1997 the use of most had stabilized.

- Turning to the licit drugs, in the last half of the 1970s there was a small upward shift in the prevalence of ***alcohol*** use among seniors (see Figure 5-4i). To illustrate, between 1975 and 1979 the annual prevalence of use rate rose steadily from 85% to 88%, the monthly from 68% to 72%, and the daily from 5.7% to 6.9%. As with marijuana, 1979 was the peak year for annual use. Over the next six years, between 1979 and 1985, these prevalence rates fell. Annual prevalence fell from 88% to 86%, monthly from 72% to 66%, and daily from 6.9% to 5%. All three rates remained fairly level from about 1985 to 1987, after which they showed some further decline. Thirty-day prevalence, for example, fell from 66% in 1987 to 51% in 1993, down by more than a quarter from its peak level in 1978 (72%). The prevalence of daily alcohol use fell from 4.8% to 3.4% between 1987 and 1992, followed by a sharper drop to 2.5% in 1993, down by almost two-thirds from its peak level in 1979 (6.9%). No further declines were observed in 1994, however, based on a slightly revised set of alcohol usage questions.[42] If anything, there was evidence of some increase in use, though none of the changes reached statistical significance. From 1993 through 1997, there was a slight upward drift in the annual, 30-day, and daily prevalence of use rates. But between 1997 and 2001 there was a slight (and offsetting) downward drift in these statistics.

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[42] A slight revision was introduced in the question wording in three of the six forms in 1993 and in all six forms beginning in 1994. It added the qualifier of "more than just a few sips" to the definition of a drink of an alcoholic beverage. The 1993 data show the extent of the correction that resulted (see Tables 5-1 to 5-4). For twelfth graders, it was a relatively small correction.

- A similar pattern was observed in the prevalence of ***occasional heavy drinking*** (Table 5-4 and Figure 5-4j). When asked whether they had taken five or more drinks in a row during the prior two weeks, 37% of the seniors in 1975 said they had. This proportion rose gradually to a peak of 41% by 1979, and it remained at this peak level through 1983. In both 1984 and 1985, we observed drops of 2 percentage points in this troublesome statistic, bringing it down to 37%, exactly where it had been in 1975. There was no further change in 1986 or 1987, but over the next six years it dropped another 10 percentage points, from 38% in 1987 to 28% in 1993—two-thirds of its peak level of 41%. After 1992, it increased gradually and modestly to 31.5% in 1998, and then declined a bit through 2001 (to 30%).

- Beginning in 1991, respondents were asked to report how often they had ***been drunk*** in their lifetime, in the past 12 months, and in the past 30 days. Thirty-day prevalence of self-reported drunkenness showed declines between 1991 and 1993 (from 32% to 29%), followed by gradual increases through 1997 (34%), as would be expected given the data above (Tables 5-1 through 5-4 and Figure 5-4i). This statistic then declined very slightly to 33% by 2001.

- Note that there is no evidence that the 13-year decline in marijuana use observed between 1979 and 1992 led to any concomitant increase in ***alcohol*** use, as many observers suggested would happen. In fact, through 1992 there was some parallel decline in annual, monthly, and daily alcohol use as well as in occasional heavy drinking. Earlier, when marijuana use rose in the late 1970s, alcohol use moved along with it. As marijuana use rose again in the 1990s, alcohol use seemed to be edging up with it, although certainly not rising as sharply. In sum, there is little evidence here to support what we have termed "the displacement hypothesis," which implies that an increase in marijuana use will lead to a decline in alcohol use, or vice versa. Instead, both substances appear to vary in harmony, perhaps both reflecting changes in a more general construct such as the tendency to use psychoactive substances, whether licit or illicit, or the frequency with which teens "party" or not.

- ***Cigarette*** use among high school seniors peaked in 1976 and 1977, as measured by lifetime, 30-day, and daily prevalence. (Annual prevalence of use is not asked.) Over the next four years, 30-day prevalence dropped substantially, from 38% in the class of 1977 to 29% in the class of 1981 (see Tables 5-3 and 5-4 and Figure 5-4k). More importantly, ***daily cigarette use*** dropped over that same interval from 29% to 20%, and daily use of a half-pack or more from 19% to 14%. But by 1982 and 1983 the decline had clearly halted. The earlier decline resumed briefly in 1984; daily use fell from 21% (in 1983) to 19% and daily use of a half-pack or more dropped from 14% to 12%. In the eight years between 1984 and 1992, there was very little further change: 30-day prevalence fell from 29% to 28%, daily use from 19% to 17%, and daily use of a half-pack or more from 12% to 10%. Despite the general decline in the use of most other drugs during this period, despite the increasingly restrictive legislation with regard to smoking debated and enacted at state and local levels, and despite prevention efforts made in many school systems, there was a noteworthy lack of any appreciable decline in smoking rates. After 1992, both the 30-day smoking rate and the current daily smoking rate actually rose significantly, with monthly use increasing steadily from 28% in 1992 to 37% by 1997 and daily use increasing from 17% to 25%. Finally, by 1998, a turnaround of this upward trend began to emerge, and it accelerated in 2000. Thirty-day prevalence fell from 36.5% in 1997 to 29.5% in 2001, and daily prevalence fell from a recent peak of 24.6% in 1997 to 19.0% in 2001.

- We believe that the intense public debate over ***cigarette*** policies likely played an important role in bringing about the recent turnaround, but there have been other developments that we believe may well have contributed, including (1) increases in cigarette prices, brought about in part by the tobacco industry settlement with the states; (2) substantially increased prevention activities in a number of states; (3) the removal of certain types of advertising (including billboards) nationwide under the terms of the tobacco settlement; (4) the initiation of a national anti-smoking ad campaign by the American Legacy Foundation; and (5) efforts by the FDA, in cooperation with the states, to reduce youth access to cigarettes. (The last effort eventually was brought to an end by a ruling of the Supreme Court.) Further, the fact that smoking has been falling sooner and faster at lower grade levels suggests that smoking among seniors is likely to continue dropping as a result of the cumulated cohort effects working their way up the age spectrum.

- Questions about the use of ***smokeless tobacco*** (Figure 5-4l), which includes chewing tobacco and snuff, were first introduced in 1986. They were omitted in 1990 and 1991 and then reintroduced in 1992. Results show a high rate of use for the sample overall, particularly for males, who account for nearly all of the use. The trends for the period 1986 to 1989 showed a decline in use, with 30-day prevalence falling steadily from 11.5% to 8.4%. When the questions were reintroduced in 1992, the usage rate (11.4%) almost matched the 1986 level. Use rose slightly, to 12.2% in 1995, but then fell back considerably, to 7.8% by 2001. In 2001, one-fifth (20%) of all seniors had tried smokeless tobacco in their lifetime and 2.8% were current daily users. In sum, the use of smokeless tobacco has fallen substantially since 1995 among seniors, while their use of cigarettes has been falling since 1997.

TRENDS IN PREVALENCE OF USE 1991-2001: EIGHTH AND TENTH GRADERS

To facilitate cross-grade comparisons, trend data for all three grades (eighth, tenth, and twelfth) are included in Tables 5-5a through 5-5b and Figures 5-4a through 5-4n. (Note that Tables 2-1 through 2-3 in Chapter 2, "Key Findings: An Overview and Integration Across Five Populations," augment Tables 5-5a through 5-5b with trend data on college students and young adults.) Our discussion of trends in use at eighth and tenth grades must be delimited to a much shorter historical period than that for twelfth graders, because data on them were first gathered in 1991.

- Since data first became available in 1991 for all three grade levels, the eighth-, tenth-, and twelfth-grade trends in the use of ***illicit*** drugs have moved largely, though not completely, in parallel. From 1991 through 1996, this has meant some increase in use at all grade levels for most drugs. (It is important to note, however, that the eighth graders were the first to show the increase for many of the drugs over the 1991-1992 interval). In 1997, the prevalence rates for most drugs leveled off, or began to level off, in all grades and in 1998 most showed some decline in all grades. Just as the eighth graders were the first to show an increase in the early 1990s, they also were the first to show many of the decreases in the late 1990s.

- ***Marijuana*** use (Figure 5-4a) rose particularly sharply among eighth graders in the 1990s, with annual prevalence tripling between 1991 and 1996, from 6% to 18%. Starting a year later, use rose significantly among tenth and twelfth graders as well. Between 1992 and 1997, among tenth graders annual prevalence of use more than doubled, rising from 15% to 35%. It increased by more than two-thirds, from 22% to 39%, among twelfth graders. In 1997, the prevalence rates began to decline among eighth graders. (Figure 5-4a shows that the increase was decelerating in grades 10 and 12.) By 1998, the upper grades had started to decline as well. Eighth graders have shown a steady decline since their peak in 1996 (18.3% annual prevalence), reaching 15.4% by 2001. While both tenth and twelfth graders have shown some decline since their peaks in 1997 (34.8% and 38.5%, respectively), their progress has not been as steady or as large (32.7% and 37.0%, respectively, in 2001.) Clearly there has been an end to the rapid rise in marijuana use among teenagers in the early 1990s, but whatever downturn there has been has been modest so far. It is important to note that the two directional changes that have occurred so far have occurred first among eighth graders. This suggests that eighth graders may be the most immediately responsive to changing influences in the larger social environment. The lag in the decline in the later grades could also reflect some cohort effects (i.e., lingering effects of changes in use that occurred in earlier years).

- ***Daily marijuana*** use also went up sharply in the 1990s in all three grades (see Figure 5-4m). In fact, in proportional terms, the increases were larger than those for annual prevalence. For the period 1992-1996, daily use among eighth graders increased, from 0.2% to 1.5%, before declining significantly to 1.1% in 1997. For the period 1992-1997, daily use among tenth graders rose more, from 0.8% to 3.7%, and among twelfth graders, from 1.9% to 5.8%. Since 1997 the daily prevalence rates have remained relatively level in all grades (though there was a significant 0.7% increase in 2001 in tenth grade), illustrating how changes in daily use tend to lag changes in annual prevalence, for instance.

- Annual ***hallucinogen*** use (Figure 5-4d) rose in all three grade levels from 1991 to 1996, followed by some decline in all three grades from 1996 through 2000. In 2001, only the twelfth graders failed to show further significant decrease. The two components of the hallucinogens class, LSD and hallucinogens other than LSD, have generally followed the same pattern. Note that LSD currently accounts for most of the hallucinogen use at all grade levels.

- The increase in ***LSD*** use in the early 1990s (Figure 5-4d) is of particular interest because LSD was one of the first drugs to decline in use in the long-term epidemic, almost surely due to growing concerns in the early to mid-1970s about its dangers. The more recent increase in its use may have reflected the effects of what we have labeled "generational forgetting"—that is, replacement cohorts do not have as much concern about its dangers as their predecessors did because they have not had comparable opportunities for direct and vicarious learning about the consequences of using the drug.[43] As will be described later, the downturn in LSD use in recent years has not been accompanied by the expected changes in perceived risk and disapproval, suggesting to us that the decline may be due more to a displacement by another drug, such as ecstasy, than any increased aversion to LSD per se.

- ***Crack*** use was at quite low levels in 1991 (Table 5-5b and Figure 5-4e). It began to rise among eighth graders after 1991, among tenth graders after 1992, and among twelfth graders after 1993. From these quite low rates, the annual prevalence of use rate roughly tripled among eighth graders (from 0.7% in 1991 to 2.1% in 1998) and tenth graders (from 0.9% in 1992 to 2.5% in 1998), and it rose by two-thirds among twelfth graders (from 1.5% in 1993 to 2.7% in 1999). Crack was one of the very few drug classes still showing evidence of continued increase in 1998. The increases stalled for tenth and twelfth graders in 1999. Eighth graders showed a significant decrease in 1999, as did twelfth graders for the first time in 2000. No appreciable change in crack use occurred in 2001.

- The use of ***other cocaine*** also rose some during the 1990s at all three grade levels, though it did not attain the levels observed in the mid-1980s. Among eighth graders, annual prevalence of use rose from 1.0% in 1991 to 2.5% in 1996, before leveling. Increases began after 1992 in the older grades, paused in 1998, and then continued into 1999. Between 1992 and 1999, the increase rose from 1.7% to 4.4% among tenth graders and from 2.6% to 5.8% among twelfth graders. Use has declined from the peak in 1998 in eighth grade (from 2.4% to 1.9% in 2001), and from the peak in 1999 in tenth and twelfth grades (down from 4.4% to 3.0% in tenth and from 5.8 to 4.4% in twelfth). Thus, both powder cocaine and crack cocaine use increased considerably in proportional terms during the 1990s, but because each started from a very low base, the absolute increases were relatively small, and neither class of drugs has reached the levels they had attained in the mid-1980s. Since the late 1990s there has been some decline in use.

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[43] See Johnston, L. D. (1991). Toward a theory of drug epidemics. In R. L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 93-132). Hillsdale, NJ: Lawrence Erlbaum.

- The use of ***amphetamines*** (Figure 5-4a) also increased at all three grade levels during the 1990s, reaching annual prevalence rates by 1996 of 9.1% for eighth graders (versus 6.2% in 1991), 12.4% for tenth graders (versus 8.2% in 1992), and 9.5% for twelfth graders (versus 7.1% in 1992). Like several other drugs, the rise in amphetamine use appears to have begun a year earlier (in 1992) among eighth graders than among tenth and twelfth graders. These trends diverged a little in 1997, as use fell significantly in eighth grade, leveled in tenth grade, and continued to increase in twelfth grade. By 1998, and continuing into 1999, use among both eighth graders and tenth graders was declining and use at twelfth grade had leveled. Thus, we once again see a staggered inflection point in the trends, quite likely reflecting a cohort effect. There has been little further change since 1999.

- Between 1991 and 1995, ***inhalant*** use (Figure 5-4b) rose by more than a third among eighth and tenth graders, with annual prevalence of use reaching 12.8% and 9.6%, respectively. (Recall that inhalant use tends to be higher in the lower grades.) Among twelfth graders, use rose from 6.2% to 8.0% between 1992 and 1995. After 1995, however, inhalant use has been declining gradually at all grade levels, and the total decline has been appreciable.

  As Figure 5-4b illustrates, inhalant use, unadjusted for the use of nitrite inhalants, had been on the rise among twelfth graders for a long time. Very likely the same was true among eighth and tenth graders, although our data on them cover only 1991 forward. The anti-inhalant campaign launched by the Partnership for a Drug-Free America in 1995 (partly in response to the results reported from Monitoring the Future) may have played an important role in reversing this troublesome long-term trend. (There was a jump in the perceived risk of inhalant use between the 1995 and 1996 surveys, as will be discussed in a later chapter.) The gradual declines continued into 2001.

- ***Tranquilizer*** use is not nearly as prevalent today as it was 27 years ago, but it showed a very gradual increase at all three grade levels in the early 1990s (see Table 5-5a and Figure 5-4b). From 1991 to 1996, annual prevalence increased at the eighth-grade level, from 1.8% to 3.3%, before starting a decline (reaching 2.5% in 1999). The increase at tenth and twelfth grades started later and continued through 1999, before leveling: from 3.3% in 1994 to 5.4% in 1999 among tenth graders, and from 2.8% in 1992 to 5.8% in 1999 among twelfth graders. This divergence over those three years between the downward trend for eighth graders and the continuing increase among tenth and twelfth graders is quite unusual. However, it is consistent with the finding that the eighth graders are showing more decline in general, for example, for marijuana.

- There was a large proportional increase in ***heroin*** use between 1991 and 1996 at all three grade levels. Use peaked in 1996 among eighth graders and a year later in the upper two grades after doubling or tripling at each grade level (see Figure 5-4f). Usage rates then remained quite stable through 1999 before showing a divergence, with use declining significantly among eighth graders in 2000 and rising significantly among twelfth graders. In 2001 significant declines finally were observed in the upper two grades, as well.

  As mentioned, we believe that the availability of very pure heroin, which could be taken by non-injection means, contributed in an important way to the sharp rise in heroin use in the early 1990s. The importance of non-injectable heroin use by 1995 is documented in Table 5-6, which shows for each grade the proportion of users (based on several prevalence periods) who used heroin either by ***injection*** or ***non-injection*** means, or by both means. For eighth graders, the table shows a rough equivalence between the two methods of administration (with and without a needle) from 1995 to 1999. Among tenth graders over the same time interval, somewhat more have used heroin without than with a needle, and the same was even more true for twelfth graders. In 2000, using by both means declined among eighth graders and using only without a needle increased among twelfth graders. But in 2001 all three grade levels showed significant declines in the proportion of students using heroin without using a needle.

- As already has been mentioned, ***ecstasy*** (***MDMA***) use fell among twelfth graders from 1996 (when it was first measured) through 1998 (see Table 5-5a). The same happened at eighth and tenth grade, as well. But in 1999 there was a significant increase in the upper two grades—one of the more important increases to occur in 1999. The eighth graders did not show this resurgence, however, until 2000, when they had a significant increase in ecstasy use, as did the twelfth graders. Annual prevalence of ecstasy use rose some in all three grades in 2001, but by lesser amounts, suggesting a clear deceleration in the rise.

- At all three grade levels, the annual prevalence of ***Rohypnol*** use remained fairly stable through 1998 from when it was first measured in 1996. Decline then followed at all three grades through 2000, resulting in annual prevalence rates that are quite low: 0.5% in eighth grade and 0.8% in both tenth and twelfth grades. There was little further change in 2001.

- ***Ketamine*** and ***GHB***, both club drugs that were added to the questionnaires in the form of "tripwire" questions beginning in 2000, showed no change in their usage levels in 2001.

- The use of ***steroids*** among eighth and tenth graders fluctuated rather little between 1991 and 1998, but both grades showed a sharp and highly statistically significant jump in use in 1999. As we shall see below, this jump occurred almost entirely among boys. (Twelfth grade is the only grade level at which there is a measure of perceived risk for steroids and, even though twelfth grade use did not jump in 1999, perceived risk fell sharply that year. It seems likely that perceived risk fell among eighth and tenth graders, as well, in which case it may have contributed to the sudden increase in use.) In 2000 only the tenth graders showed a further increase (significant) in use, and in 2001 only the twelfth graders did, possibly reflecting some cohort effect.

- From 1991 to 1993, the lifetime, annual, and 30-day prevalence measures for ***alcohol*** (Figure 5-4i) all showed a small decline in all three grades (except for 30-day use among eighth graders). Between 1993 and 1996 in the case of eighth and tenth graders, and 1993 to 1997 in the case of twelfth graders, there was a slight upward drift in the annual and 30-day prevalence rates. Since 1996, there has been some decline in drinking among eighth graders (for example, 30-day prevalence dropped from 26% in 1996 to 22% in 2001) but not much change in the upper grades.

- ***Occasional heavy drinking*** (Figure 5-4j), defined as having five or more drinks in a row at least once in the prior two weeks, had been rising gradually among eighth graders after 1991, among tenth graders after 1992, and among twelfth graders after 1993. After rising three to four percentage points in each case, it began to decline in eighth grade after 1996, in tenth grade after 1997, and in twelfth grade after 1998; but it actually has changed rather little in the years since. ***Having been drunk*** in the past 30 days shows a roughly similar pattern.

- ***Cigarette*** smoking generally is not expected to move synchronously across the three grade levels because changes have usually been the result of cohort effects rather than secular trends. (See Chapter 6 for a further discussion of this point.) However, the prevalence of current smoking began to rise among eighth and tenth graders after 1991 and among twelfth graders after 1992, and until 1996 it had been moving steadily upward in all three grades (see Figure 5-4k). In 1996 current smoking peaked in grades 8 and 10, and it peaked a year later among twelfth graders. The proportional increases in the smoking rates were considerable during this period—about a 50% increase in the two lower grades, though "only" a 31% increase at twelfth grade.

- Because of this general parallel movement, which is more characteristic of a secular trend, we are inclined to look for some contemporaneous historical correlates to explain it. One possibility is that cigarette prices dropped on average because of increased price competition among brands. Another is that cigarette advertising and promotion had grown and/or become more effective at reaching youth. Still a third possibility is that the portrayal of smoking had increased appreciably in the entertainment media. We think there is some evidence supportive of all three possibilities; but whatever the causes, they seemed to reach young people across the spectrum. Therefore, we infer that these changes must have resulted from culture-wide influences of the type just mentioned. After 1996, the three grades began to diverge again.

- In 1997, the 30-day smoking rate began to decline among eighth graders, to level among tenth graders, and to continue to increase among twelfth graders; but by 1998 there was evidence of a decline in all three grades, one that continued into 2001. As mentioned earlier, we think that the extensive adverse publicity generated by the state attorneys general, the President, and Congress in the debate over a possible legal settlement with the tobacco companies may have contributed importantly to this turnaround. Price increases, the removal of some forms of advertising, the implementation of vigorous anti-smoking advertising, and strong prevention programs in some states also may have contributed. Despite the recent decline, 12% of the eighth graders, 21% of the tenth graders, and 30% of the twelfth graders (about a third) are current smokers.

- While there may have been some growth in the use of ***smokeless tobacco*** in the early 1990s (Figure 5-4l), there is evidence of a fair decline over the last few years at all three grade levels, though there was no further decline in 2001.

TRENDS IN NONCONTINUATION RATES: TWELFTH GRADERS

Table 5-7a shows how the noncontinuation rates observed for the various classes of drugs have changed over time among twelfth graders. Noncontinuation refers to use of the drug in one's lifetime but not in the past 12 months. The noncontinuation rate is the percent of lifetime users who did not report using the drug in the past 12 months.

- ***Marijuana*** showed some increase in noncontinuation rates between 1979 (16%) and 1984 (27%). This increase gave rise to the greater drop observed in annual than in lifetime prevalence of use, because the latter is influenced only by changes in the initiation rate, whereas the former is influenced by both the initiation rate and the noncontinuation rate. Between 1984 and 1987 there was no further increase, followed by another rise to 35% in 1991. The noncontinuation rate's sharp fall after 1991 to 17% by 1995 helps to explain the sharp turnaround in the annual and 30-day prevalence of use rates during the 1990s. By 1998, the noncontinuation rate had climbed some to 24%, where it stabilized (25% in 2001).

- The noncontinuation rate for ***cocaine*** decreased from 38% in 1976 to 22% in 1979, corresponding to a period of increase in the annual prevalence of use. It then remained fairly stable through 1986, corresponding to a period of stability in the actual prevalence statistics. After 1986, the noncontinuation rate rose substantially—from 25% in 1986 to 55% in 1991—as use fell dramatically. This pattern strongly suggests that the sharp increase in perceived risk, which began in 1986, influenced both the initiation rate *and* the quitting rates. After 1991, the noncontinuation rate began declining fairly rapidly once again, reaching 31% by 1996. (Recall that the overall use of cocaine was increasing during that period.) After 1996, noncontinuation rates rose again, corresponding to a period of leveling in overall use—reaching 42% by 2000, where it remained in 2002. In sum, changes in the noncontinuation rate have contributed appreciably to the overall changes, both increases and decreases, in the prevalence of cocaine use.

- ***Crack cocaine*** also showed a sharp rise in noncontinuation, from 28% in 1987 to 52% in 1991, as prevalence of use rates declined. Then, the noncontinuation rate fell back to 30% by 1995, as usage rates rose. Noncontinuation rates for crack then began to increase once again, reaching 43% by 1998, when overall use leveled. There has been little change since 1998.

- Noncontinuation of ***amphetamine*** use has also fluctuated widely over the years. It rose between 1982 (27%) and 1992 (49%). (Earlier data, based on the unrevised questions, suggest that the change probably began after 1981.) Between 1992 and 1996, when overall use was rising, noncontinuation fell from 49% among lifetime users to 38% by 1996. This statistic then remained fairly level, corresponding to a period of leveling in use, though it was down to 33% by 2001.

- Much of the previous decline in ***sedative*** use also was accounted for by a changing rate of noncontinuation for the specific substances involved. For example, in the case of ***barbiturates***, the noncontinuation rate rose from 36% in 1979 to 52% in 1988. (It then declined in the 1990s to 37% by 1995, when it leveled.) The figures for ***methaqualone*** are 29% in 1979, rising dramatically to 61% by 1988 and 52% in 1989. (Since 1990, use rates have been very low, and because the questions about methaqualone are on only one form, noncontinuation rates tend to be much more variable than for other drugs.)

- As overall use of ***tranquilizers*** declined, users showed a steady, gradual increase in their noncontinuation rates between 1975 and 1982, from 38% to 50%. Then, there was little further systematic change for a decade until 1992. After 1992, though, there was a decline, from 53% in 1992 to 36% in 1996, where it has remained level since.

- Between 1982 and 1991, the ***LSD*** noncontinuation rate fluctuated within a rather narrow range (between 37% and 41%), without a clear trend developing. Between 1991 and 1996, though, the noncontinuation rate dropped from 41% to

30%, accounting for some of the increase in overall LSD use occurring during that period. Since 1996 the rate has risen to 39% by 2001, as overall use has started to decline.

- ***Steroid*** use had a sharp, 14 percentage point increase in noncontinuation (to 48%) in 1992, a year in which there was an increase in the perceived dangers of using steroids, but the rate has fallen back some to 35% by 2001.

- Although ***alcohol*** has always had an extremely low rate of noncontinuation, that rate increased gradually from about 1988 to 1993, perhaps reflecting the changed norms regarding its use (see Chapter 8). These norms, in turn, may have reflected both the influence of several states' change in the legal drinking age and a greater emphasis on the dangers of drunk driving. There has been little further change since 1993, however, during a period in which there has been little change in use overall.

Table 5-7b provides noncontinuation rates for seniors who were more established users, here defined as those who reported having used a drug 10 or more times during their lifetime. It shows that noncontinuation is far less likely among heavier users than among all users of a given drug. Further, while the trends in noncontinuation mentioned earlier generally have been similar to trends observed in the noncontinuation rates for heavier users of those same drugs, the fluctuations have tended to be considerably smaller among the heavier users.

The reader is cautioned that the number of cases in each cell in Table 5-7b is considerably smaller than in most other tables—particularly when overall usage rates are low to start with; therefore, the trend data are much more uneven.

- Note that the noncontinuation rate of ***marijuana*** users who had used the drug at least 10 times has been very low throughout the past 25 years. It has ranged only from a low of 4% in 1975 to a high of 12% in 1990.

- Noncontinuation rates for experienced users of ***inhalants*** actually dropped in the late 1970s, perhaps as a result of the advent of nitrites—which are used at older ages than most of the other inhalants. However, when the use of nitrites declined during the 1980s, and again in the late 1990s, the noncontinuation rates for experienced users failed to increase.

- Note the sharp rise in the late 1980s in the noncontinuation rates for ***cocaine*** and ***crack***, even among these more experienced users. The noncontinuation rates peaked in 1991, before falling back as the use of these drugs became more popular. After about 1996, the noncontinuation rate rose modestly.

IMPLICATIONS FOR PREVENTION

Whenever prevention programs are designed—whether for schools, families, communities, or the media—questions arise as to what *should* be prevented and what *can* be prevented. While it is axiomatic that the initiation of use should and can be prevented, there is considerably less consensus as to whether the discontinuation of use is a realistic goal. We believe the results just presented help to inform that debate considerably.

It is clear that the totality of social forces that brought about the large declines in drug use during the 1980s and the substantial increases in use during the 1990s operated through their effects on *both* initiation rates and noncontinuation rates. Put another way, the decreases and subsequent increases in annual and 30-day prevalence of use rates were considerably larger than could be explained by fluctuations in initiation rates alone. *These findings show that noncontinuation can and does change appreciably and, therefore, that any comprehensive prevention strategy should include increasing cessation as one of its objectives—particularly cessation from early stage use, as we will discuss next.*

It is important to distinguish among users at different levels of involvement. A comparison of the rates in Table 5-7a, based on all previous users, and Table 5-7b, based only on people who reported having used a given drug 10 or more times, is highly instructive. *Clearly, very appreciable proportions of beginning users can be dissuaded from continuing their use; but once they have reached a certain level of involvement (even as few as 10 occasions of use), only very modest proportions have been so dissuaded—even in the best of times. This makes early intervention not only a viable goal for prevention but also a particularly important one.*

COMPARISONS AMONG SUBGROUPS IN TRENDS IN PREVALENCE

This section provides trend comparisons for key population subgroups defined on the following six dimensions: gender, college plans, region of the country, population density, socioeconomic status, and racial/ethnic group. In general, we will focus on the results from twelfth graders, because there is a considerably shorter trend interval available for eighth and tenth graders. Appendix D to this volume contains tables providing trends for these various subgroups on many drugs. The tables are organized by drug, and data are provided for all three grade levels. There exists a matching set of figures showing for all three grade levels the trends in the use of each drug by the different subgroups on each dimension (e.g., boys vs. girls or college-bound vs. noncollege-bound, etc.). However, because of their sheer number, these figures are not included in the present volume. They may be accessed on the Monitoring the Future Web site at www.monitoringthefuture.org. (Click on "Publications" and then, under "Occasional Papers," locate Occasional Paper No. 57.[44])

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[44] Johnston, L. D., O'Malley, P. M., and Bachman, J. G. (2002). *Demographic subgroup trends for various licit and illicit drugs, 1975-2001.* (Monitoring the Future Occasional Paper No. 57). Ann Arbor: Institute for Social Research.

Gender Differences in Trends

- Trends in the proportion of males and females who used ***any illicit drug*** in the prior year have differed some. Annual prevalence rose among males between 1975 and 1978, from 49% to 59%, and then declined steadily to 29% by 1992 (see Figure 5-7). Use among females peaked later, increasing from 41% in 1975 to 51% in 1981 and then dropping to 25% by 1992. (If amphetamine use is not included in the statistics, use by females peaked earlier—in 1979—and then declined as well.) Both male and female rates were up considerably by 1997, to 44% and 40%, respectively. Since then there has been little change for either.

- In the lower grades, although trends tend to remain fairly parallel, females have generally had a slightly higher prevalence of use of ***any illicit drugs other than marijuana***, whereas in twelfth grade the opposite has been true. (See Tables D-3 and D-4 in Appendix D.)

- Most of the gender differences mentioned in Chapter 4 for individual classes of drugs have remained relatively unchanged over the past 27 years—that is, any trends in overall use have been fairly parallel for males and females. There are, however, some exceptions (see Appendix D for the detailed tables).

- The absolute differences between genders in ***marijuana*** use narrowed somewhat among twelfth graders between the late 1970s and mid-1980s—a period of substantial decline. Their use rates then declined in parallel from 1986 to 1992. At all three grade levels, both genders also showed a several-year increase in marijuana use after 1992. During this interval, the gender difference grew somewhat larger again for twelfth graders. This pattern, in which a longstanding difference between subgroups tends to enlarge in periods of increasing use and to diminish during declines in use, can be seen for a number of other cross-break variables, not just for gender (see, for example, Figure 5-10b).

- Between 1975 and 1977, there was a small gender difference in ***tranquilizer*** use for twelfth graders (females used them more frequently than males). This difference had virtually disappeared by 1978, and there was no gender difference for some 14 years (through 1992), but use among males rose more after 1992, opening a gender difference in which use by males has been higher. In eighth grade there has been a consistent gender difference since 1991, with slightly higher use among females. In tenth grade, tranquilizer use among females has consistently been equal to or higher than use among males.

- Among seniors, gender differences in ***cocaine*** use were greatest in the peak years of use (1979 through 1986): male use was higher and then diminished sharply during the ensuing decline phase. The difference shrank considerably, but males were still higher. After 1992, the difference widened again as use increased more among males; but as a turnaround began after 1999, some convergence has once again begun to occur. There have been no appreciable gender differences in cocaine use in eighth or tenth grades since 1991, when data were first available.

- The gender differences in ***crack*** use are very similar to those for cocaine use overall: there have always been higher rates of use among male twelfth graders compared to females (since 1986, when data were first available, although use grew a bit more among twelfth-grade males after 1992, but has declined more since the turnaround after 1998). There has been little difference among eighth and tenth graders in the trends for the recent time intervals for which data are available (since 1991).

- Regarding ***amphetamine*** use by twelfth graders, a slight gender difference emerged in 1980 and 1981, using the original version of the question; but the revised question introduced in 1982 (further clarifying that non-prescription stimulants should be omitted) showed no gender difference. This strongly suggests that over-the-counter diet pills accounted for the higher use among females in those two years. Since 1982, the rates for both genders have remained very close, showing a substantial decrease in use through 1992 and a comparable increase in use since then. In both eighth and tenth grades, females consistently reported higher use than males. Females had a sharper increase in use from 1992 to 1996, when use was rising, and a sharper decrease in use in the decline from 1995 or 1996 to 1999.

- The use of ***ice*** (data available only for twelfth graders) has been consistently higher among males, rising more among males through 1996 than among females.

- Trends for the two genders in the use of ***narcotics other than heroin*** converged during a long period of decline in use among seniors from 1979 to 1992. (Males had always had higher rates of use.) However, males showed a much sharper increase in use after 1992, once again opening a substantial gap.

- Among twelfth graders the gender differences in ***alcohol*** use narrowed slightly between 1975 and 1987. For example, the 30-day prevalence rates for males and females differed by 13 percentage points in 1975 (75% versus 62%, respectively), but that difference was halved (to 7 percentage points) by 1987. (In 2001 the difference was 10 percentage points.) Although substantial gender differences in ***daily use*** and ***occasions of heavy drinking*** still remain, by 1993 differences had narrowed there also (Figures 5-5 and 5-6a). For example, between 1975 and 1993 the proportion of males who reported having had five or more drinks in a row during the prior two weeks showed a net decrease of 14 percentage points (49% to 35%), whereas such use among females decreased by only 5 percentage points, from 26% to 21%.[45] By 1998, rates for both genders had risen some, to 39% and

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[45] It is worth noting that the same number of drinks produces a substantially greater impact on the blood alcohol level of the average female than the average male, because of gender differences in the metabolism of alcohol and in body weight. Thus, gender differences in the frequency of actually getting drunk may not be as great as the heavy drinking statistics would indicate, since they are based on a fixed number of drinks.

24%, respectively, opening the gap a little. Since 1998 both genders have shown a small decline. In general, the gender difference has been less at tenth grade and less still at eighth grade.

- On one of the six questionnaire forms administered to twelfth graders, respondents are asked separately about their use of ***beer***, ***wine***, and ***hard liquor***. The answers to these questions reveal that differences in beer consumption account for much of the large gender difference in occasions of heavy drinking: 36% of 2001 senior males (versus 18% of the females) reported having had five or more beers in a row during the prior two weeks. Males were also considerably more likely than females to report having had five or more drinks of hard liquor (26% for males versus 19% for females) but only a bit more likely to have consumed wine that heavily (6% for males and 5% for females). This pattern—a large gender difference in the heavy use of beer, a smaller difference in the heavy use of hard liquor, and a much smaller difference in the heavy use of wine—has been present throughout the study, with little systematic change over time. In 1988, questions on wine coolers were added and here the gender difference was reversed, with females reporting slightly higher rates of heavy drinking of wine coolers.

- In the lower grades, male and female ***alcohol*** consumption rates are more equivalent and have remained so since first measured in 1991. Unlike the twelfth graders, there is virtually no gender difference in annual or 30-day prevalence of any use or in the annual prevalence of ***having been drunk***. These gender differences seem to emerge with age, as is the case for many of the drugs. Emerging differences with age also holds true for binge drinking in the prior two weeks. The data consistently have shown only a small gender difference in eighth grade, a modest one in tenth grade, and a large one (though it has diminished somewhat) in twelfth grade. The same pattern has been true for self-reported drunkenness (see Tables D-42 through D-45).

- In 1976 we observed that, among twelfth graders, females had caught up to males in daily ***cigarette*** smoking and by 1977 had exceeded them (see Figure 5-5). Between 1977 and 1981, both genders showed a decline in the prevalence of such smoking, but use among males dropped slightly more, resulting in females maintaining higher rates of daily smoking until 1990. However, the gender difference was declining in the latter half of the 1980s, as male use began to rise gradually and female use declined a bit. The increase in daily smoking among males was greater in the 1990s, and female use did not begin to rise until after 1992. The net result was a crossover of the two lines for daily prevalence of use in 1991, followed by a roughly parallel increase from 1992 to 1997. Both genders declined by 3.9 percentage points between 1997 and 2000. In 2001 their rates converged.

At the eighth- and tenth- grade levels there has been rather little gender difference in 30-day or daily smoking levels, though eighth-grade girls had slightly higher rates in the mid- and late 1990s (30-day use) and late 1990s (daily use). Both genders moved up sharply in the early 1990s until 1996, and both have shown a considerable decline since.

- Very large gender differences in the use of ***smokeless tobacco*** have been consistently observed at all grade levels, with much higher rates among males. Since 1994, there has been a substantial decline overall in use of smokeless tobacco among eighth-grade males (their 30-day prevalence dropped from 12.8% in 1994 to 6.7% in 2000), a considerable drop among tenth-grade males (from 19.2% to 11.4% over the same period) and, since 1995, a similar decline at twelfth grade (from 23.6% in 1995 to 14.4% in 2000). In 2001, however, males at all grades showed an end to the decline and/or a leveling. (See Tables D-52 and D-53 in Appendix D.) Since girls' use fluctuates rather little because it is so low, the gender differences rise and fall with the changes in use by males. (Because of the smaller samples on which this question is based in twelfth grade, the trend curves are somewhat more uneven.)

- ***Steroid*** use is also much higher among males, and the trends have differed somewhat for males and females. From 1991 to 1995 (or 1996 in the case of the tenth graders) eighth- and tenth-grade girls showed a gradual increase in their steroid use, while use among boys declined some or held steady. From 1996 through 1999 (or 2000 in the case of the tenth graders) eighth- and tenth-grade boys showed a much greater increase in use than did girls in those grades, widening the gender gap. Girls have shown a fairly steady increase in their use of steroids from the early 1990s through 2001, though, despite their low levels relative to boys.

  Data are available for a little longer period for twelfth graders (since 1989). Both genders showed a decline in steroid use from 1989 through 1992, then some increase for a couple of years. Both genders showed some rise in the late 1990s through 2001. Overall, the gender difference in twelfth grade is about as large in 2001 as it has been in the past.

Trend Differences Related to College Plans

It is important to realize that the proportion of young people expecting to attend college has risen quite dramatically over the past 27 years covered by this study. In the mid-1970s, only about half of twelfth graders surveyed said that they "definitely would" or "probably would" complete a four-year college program. (They constitute the "college-bound" in the current discussion.) By the late 1990s, however, over three-quarters of graduating seniors met the definition for being college-bound. This means that the two groups compared here are changing proportions of the total population and, therefore, do not represent exactly comparable segments of the population across time.

There has been rather little such upward drift in college plans during the 1990s at lower grade levels, but generally 78% to 88% of each class already expects to attend college. Whether or not these expectations are realistic, the reader is reminded that at these lower grades the noncollege-bound constitute a very small proportion of the whole class.

- Both college-bound and noncollege-bound students have shown fairly parallel trends in overall ***illicit drug use*** over the years (see Figure 5-8), with the noncollege-bound consistently having the higher rate of use.[46]

- Changes in the use of the other specific drug classes also have been generally parallel for the two groups since 1976, with only minor exceptions (see Appendix D for comparisons on the various drugs).

- While changes in ***marijuana*** use have been quite parallel for the two groups at all three grade levels, it is noteworthy that all of the gradual decline among eighth graders that has occurred since 1996 has occurred among the college-bound only.

- Between 1983 and 1986, annual ***cocaine*** use increased very little among the college-bound seniors but rose by about one-quarter among the noncollege-bound seniors, very likely due to the greater popularity of ***crack*** among the noncollege-bound. From 1986 through 1993, both groups showed large declines in use and some convergence in their rates of cocaine use. During the period of increasing use in the 1990s, the differences enlarged again, particularly in the lower grade levels. Just as the increase in cocaine use was sharper among the noncollege-bound through most of the 1990s at all grade levels, the declines of the past two or three years have been sharper.

- As the overall prevalence of use of a number of drugs fell through 1992 among twelfth graders, there was some convergence of usage rates between the college-bound and noncollege-bound, due to a greater drop in use among the noncollege-bound. This was true for ***tranquilizers***, ***sedatives***, ***methaqualone***, ***amphetamines***, ***barbiturates***, ***nitrite inhalants***, ***hallucinogens other than LSD***, ***LSD***, and ***narcotics other than heroin***. But as the use of a number of these drugs began to increase after 1992, the differences grew larger for many of them at all grade levels (e.g., LSD, psychedelics other than LSD, amphetamines, and tranquilizers). The increases were sharper, and in some cases started earlier, among the noncollege-bound.

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[46] Because of excessive missing data in 1975 on the variable measuring college plans, group comparisons are not presented for that year.

- For many years there was only a modest absolute difference in the low annual ***heroin*** prevalence rates observed in twelfth grade for the college- and noncollege-bound (the college-bound were lower). In proportional terms, however, the noncollege-bound have been about twice as likely to have used heroin in the prior year. (See Table D-24 in Appendix D.)

  At the lower grade levels there has been a larger proportional and absolute difference in heroin use between these two groups, and in both grades the noncollege-bound group showed a sharper rise in heroin use in the 1990s than did their counterparts who said they expected to complete four years of college (Table D-23). That increase was particularly sharp among the noncollege-bound eighth graders (who now comprise only about 10% of the eighth-grade sample). The noncollege-bound have considerably higher rates of using heroin, particularly using with a needle (see Tables D-25 through D-28). The declines that began over the last one to two years have also been sharper among the non-college bound, though.

- The noncollege-bound consistently have had higher rates of ***LSD*** use in all years measured at all three grade levels, and their use has generally moved in the same direction over time (see Tables D-11 and D-12). The differences between them enlarged at all three grade levels during the 1990s, as use increased, and particularly in the lower grades. In eighth grade, the small noncollege-bound stratum has been three to four times as likely to use LSD as their peers have. During the decline in LSD use over the last several years, the differences have begun to narrow some, but they are still quite substantial.

- The use of ***ecstasy*** (***MDMA***) among seniors started out higher among the noncollege-bound in 1996, the year it was first measured, but in the years since, the rates of use have been fairly close. In the lower grades, however, the differences have been larger and more consistent. Both groups showed an increase in 2000 and 2001 at all grade levels, but the increases have been considerably sharper among the noncollege-bound, particularly in the lower grades. (As Tables D-15 and D-16 show, these figures are based on relatively low case counts, making one-year subgroup differences in trends potentially unreliable.)

- For annual ***alcohol*** prevalence, the noncollege-bound have consistently been higher than the college-bound. Between 1992 and 1993, the gap at all three grade levels widened, due to a reported greater drop among the college-bound. Because the enlarging of the gap coincided with the revision of alcohol-use questions (see footnote in "Trends in Prevalence 1975-2001: Twelfth Graders" section of this chapter), it is likely that the revision contributed, perhaps substantially, to the enlarging. This greater differential has remained in the years since. The proportional differential in all of the different alcohol measures is greatest at eighth grade, still substantial but less at tenth, and least at twelfth. (The question revisions appear to have affected the annual prevalence measure considerably more than the other alcohol use measures.)

- Among the twelfth graders, the ***binge drinking*** rates of the two groups converged modestly from 1981 to about 1990 (see Tables D-44 and D-45), as the overall prevalence rate declined, though the rate for the college-bound still remained considerably lower. Both groups showed modest increases after 1993.

  In eighth and tenth grades there have been large differences in binge drinking rates, and the two groups were diverging during much of the 1990s because the noncollege-bound exhibited a larger increase in binge drinking, whereas the college-bound had a more modest one. Both groups show evidence of a leveling or turnaround in the last year or so (Table D-44).

- At all three grade levels there have been very large differences in the current prevalence of ***cigarette*** smoking between the noncollege-bound (who have higher rates of use) and the college-bound. (For example, in 2001 the daily smoking rate was more than four times as high among the noncollege-bound eighth graders, at 17.7%, versus 3.9% for the college-bound.) In general, the broad contours of change have been fairly similar for the two groups at the twelfth-grade level, but there was, in fact, some convergence that occurred roughly over the period 1980 through 1993, as current smoking very gradually declined among the noncollege-bound but gradually increased among the college-bound. In 1980 there was a 17 percentage point differential in current smoking (39.6% vs. 22.3%), which had declined to a 10 percentage point differential by 1993 (37.3% vs. 27.3%).

  At the eighth- and tenth-grade levels, current smoking rates for the two groups diverged during the early to mid-1990s, with both groups increasing, but the noncollege-bound increasing more. Then, at all three grade levels, the college-bound were the first to show a turnaround in current smoking in the mid- to late 1990s, leading their noncollege-bound peers by a year or two. (See Tables D-46 through D-51 in Appendix D for subgroup trends in cigarette smoking.)

- The use of ***smokeless tobacco*** also has consistently been higher among the noncollege-bound at all grade levels, and the proportional differences have been very large in the eighth and tenth grades. (See Tables D-52 through D-55.) And again, the downturn in use in the mid-1990s began first among the college-bound, followed by their peers a year later at each grade.

- There has been a large and reasonably consistent difference in the rates of ***steroid*** use (Tables D-56 and D-57) in the two groups at all three grade levels, with the noncollege-bound considerably more likely to use steroids than the college-bound. During the phase of increasing steroid use in the late 1990s, the increases were greatest among the noncollege-bound, enlarging the differences between the groups at all three grade levels.

Regional Differences in Trends

Data on subgroup trends for the four regions of the country may be found in tabular form in Appendix D in this volume and in graphic form on the study's Web site, as described at the beginning of this section.

- In all four regions of the country, the proportions of high school seniors using ***any illicit drug*** during the past 12 months reached their peaks in 1978 or 1979 (see Figure 5-10a and Table D-2 in Appendix D). In the late 1970s and early 1980s, the Northeast region was consistently highest, the South lowest, and the North Central and West in between. Through the 1980s and continuing through 1992, use declined overall. The South maintained its position as having the lowest rate of use, with the other regions having similar rates of use. From 1992 to 1997, the annual use of any illicit drug increased in all four regions by roughly equivalent amounts, with use in the South remaining lowest. Since then there has been some leveling or decline in annual prevalence in all four regions. Annual prevalence now ranges from a low of 37% in the South, to 42% in the North Central and West, and 47% in the Northeast.

  Among eighth and tenth graders, all regions showed increases in illicit drug use from 1991 to 1996 (Table D-1). As with twelfth graders, leveling or declines have occurred in the most recent years.

- As noted earlier, a major factor in the early rise of illicit drug use other than marijuana (Figure 5-10a) was an increase in reported ***amphetamine*** use. The rise in amphetamine use among seniors appeared in all four regions; however, the rise in lifetime prevalence of use from 1978 to 1981 was only 6 percentage points in the South, whereas in the other regions the percentages rose between 9 and 12 points. In essence, the South was least affected by both the rise and the fall in reported amphetamine use—a pattern later repeated with cocaine. After 1981 all four regions showed substantial declines in amphetamine use through 1992. After 1992, all regions showed some increase in amphetamine use.

- The long-term ***marijuana*** trends for twelfth graders generally have shown quite parallel trends in all four regions since 1975, with the Northeast usually having the highest level, and the South having the lowest level. Marijuana use rose substantially in all four regions after 1991 for eighth graders, and after 1992 for tenth and twelfth graders. Between 1996 and 2001, all regions showed a leveling or turnaround at all grade levels.

- Cocaine use has shown very different trends in the four regions of the country, leading to the emergence of one of the largest regional differences observed for any of the drugs. (See Figure 5-10b for differences among twelfth graders in lifetime prevalence of use trends.) In the mid-1970s, there was relatively little regional variation in cocaine use, but as the nation's cocaine epidemic grew, large regional differences emerged. By 1981, annual use had roughly tripled in the West and Northeast, nearly doubled in the North Central, and increased by "only" 26% in the South. This pattern of large regional differences held for about six years, until a sharper decline in the Northeast and the West substantially reduced the differences. At all three grade levels there was a modest overall increase in use in all regions from the early 1990s through 1996 or 1997, followed by a leveling or turnaround in nearly all cases. For most of the years of the study the West has had the highest level of cocaine use at all three grade levels, but in recent years the differences have not been very large.

- When ***crack*** use was first measured among twelfth graders in 1986, there were large regional differences, with the West and Northeast having far higher rates than the North Central and South. Its use dropped appreciably in all four regions over the next several years (though rates did not peak in the North Central until 1987 or in the South until 1989, perhaps due to continued diffusion of the drug to areas that previously did not have access). The declines were large and very sharp in the West and Northeast, both of which initially had substantially higher usage rates than the other regions (as was true for powder cocaine and cocaine use overall). By 1991 little regional difference remained, although the West still had the highest rate of use. After 1991 or 1992 there were increases in all regions, but particularly in the West. In all three grades, all regions exhibited an increase in crack use since the early 1990s. Again, the West has shown the largest increases and the highest levels of use at all three grades, while the other three regions have been fairly similar in their rates of use. All regions showed evidence of a leveling or decline in crack use at all three grade levels in recent years.

- Between 1975 and 1981, sizable regional differences in ***hallucinogen*** use emerged for twelfth graders, as use in the South dropped appreciably. In 1981, both the North Central and the West had annual prevalence rates of use that were about 2½ times higher than the South (10.3%, 10.4%, and 4.1%, respectively) while the Northeast rate was three times as high (12.9%). After 1981, through the rest of the decade, hallucinogen use dropped appreciably in all regions except in the South (which continued to have the lowest rate), considerably reducing these regional differences. In the early 1990s, use was still consistently lower than average in the South, but the differences among the other three regions were small. A considerable increase in use in the South between 1991 and 1995 brought its annual rate close to the level of the other regions. There was only modest further change from 1995 to 1999; the regional differences by 2001 remain small.

- Among high school seniors the use of ***LSD*** has quite consistently been lowest in the South. Between 1988 and 1993, the use of LSD did not vary much among the other three regions for the twelfth graders, although in earlier years the trend story was quite similar to that described for hallucinogens as a group of drugs. Between 1993 and 1996, use went up quite sharply in the Northeast region, once again creating regional differences. Following a decline from 1996 to 2001 in use in the Northeast, the regional differences in 2001 are again rather small.

Regional differences in LSD use among eighth and tenth graders have generally been quite small, although the West had the highest rates of use among eighth graders from 1991 to 1998 and among tenth graders from 1991 to 1994. After 1997 the West had a sharp decline in LSD use among eighth graders, which reduced regional differences again. At tenth grade the other regions rose in their use, catching up with the West and eliminating regional differences by 1995.

- Between 1996, when ***ecstasy (MDMA)*** use was first measured, and 1998, use had fallen at all grades in all regions. (The one exception was the West in twelfth grade, where it had remained stable.) In 1999, when ecstasy use increased significantly in grades 10 and 12, by far the largest increase in both grades occurred in the Northeast, although all regions showed some increase in one or both of those grades. Then, in 2000 use rose some in the other three regions at all grade levels, including eighth grade, but not in the Northeast; but the rise was particularly sharp in the West among twelfth grade. In 2001 the North Central region showed a sharp rise in twelfth grade.

- Between 1979 and 1982, ***PCP*** use dropped precipitously in all regions for twelfth graders. The drop was greatest in the Northeast, which in 1979 had a usage rate roughly double that of all the other regions. In general, PCP use was low and relatively stable from 1982 through 1995. Annual prevalence of PCP increased in the Northeast beginning in 1996, and during the interval from 1996 to 1999, PCP use was again higher in the Northeast region than the other regions. Among twelfth graders, from the mid-1970s through the early 1980s, the Northeast and the North Central had appreciably higher 30-day prevalence and heavy drinking rates of ***alcohol*** use than did the South and West. From the early 1980s to the early 1990s, all four regions exhibited substantial declines in 30-day alcohol prevalence and occasions of heavy drinking, with the Northeast and North Central declining most. As a result, the regional differences diminished somewhat; however, the relative positions of the four regions have remained essentially unchanged. The South and the West still have the lowest rates and the Northeast and North Central the highest.

  At the lower grades there has been rather little regional difference for 30-day prevalence and for heavy drinking since 1991, when data were first collected on them, and the trends have generally been quite similar across regions.

- Among twelfth graders the West had a considerably lower 30-day prevalence of smoking from the mid-1970s through the mid-1980s, though sharper declines in the South brought its smoking rate down near to the West's by 1984. It is noteworthy that from 1992 to 1994—a period of overall increase in ***cigarette*** smoking—the West was the only region that did not show an increase in daily smoking in twelfth grade (although by 1995 use had begun to increase in the West as well). This lack of increase in the West may well be due to the fact that California conducted a major anti-smoking campaign in those years. There also was a similar lag and a lower increase in the West at tenth grade than in other regions; the eighth graders in the West showed the least increase compared to other regions and also remained the lowest of the four regions. Despite the fact that the regional differences opened some during the 1990s due to this divergence by the West, all regions at all grade levels showed an important drop in smoking rates.

- The use of ***smokeless tobacco*** has generally been highest in the South for eighth and tenth graders, followed closely by the North Central. Among twelfth graders, however, use in the North Central rose sharply after 1989, giving that region the highest rates in nearly all of the years since, with the South generally ranking second. During the late 1990s, use of smokeless tobacco fell in all regions in all three grades.
- In general, the regions have moved fairly parallel with regard to ***steroid*** use. The increase in 1999 at eighth and tenth grade was observable in all four regions. The further increase in tenth grade in 2000 was observed in all regions except the Northeast. However, the increase in twelfth grade in 2001 appears to be due mostly to a sharp increase in the Northeast. Because of the smaller samples on which this question is based in twelfth grade, the trend curves are more uneven.

Trend Differences Related to Population Density

Appendix D contains tabular trend data on all drugs for the three levels of community size distinguished here. (Their definitions may be found in Appendix B.) Selected figures are presented in this chapter, and a complete set of figures that are far easier to read than tables may be found on the study Web site, as described at the beginning of this section on subgroup trends.

- Proportions of seniors using ***any illicit drug*** in all three levels of community size peaked in 1979, at which time there were appreciable differences in use rates, with the large cities having the highest rate, and the non-urban areas the lowest (see Figure 5-11a). Use rates declined from 1979 to 1992, when the annual prevalence in all three areas converged at 27%, virtually eliminating the prior differences. (Most of the narrowing was due to changing levels of marijuana use.) There were increases in use of any illicit drugs among all three levels of community size after 1992, but the increases were smallest among the nonmetropolitan segment, leaving that segment with slightly lower rates in recent years than the other two groups. These increases halted after 1995 in the large metropolitan areas, and after 1997 in the other metropolitan areas and the nonmetropolitan areas.

- At the lower two grade levels there has been rather little difference in use as a function of community size, though the "other metropolitan areas" have had the highest levels through most of the period since 1991.

- The overall proportion of twelfth-grade students involved in the use of ***any illicit drug other than marijuana*** peaked in communities of all sizes in 1981 and then fell until 1991 or 1992 (Figure 5-11a). Since 1989, the large metropolitan areas generally have shown slightly lower rates than the other two strata—a reversal of earlier differences. After 1991 or 1992, the rates for all three strata started to increase gradually, though the increase halted in 1996 for the large metropolitan areas and in 1997 for the other metropolitan areas, and after 1999 in the nonmetropolitan areas.

- At grades 8 and 10, the large metropolitan areas have generally had somewhat lower rates of use since 1991 than the other two strata.

- During the years in which the use of various drugs increased, significant differences emerged among the three levels of population density in the use of a number of specific classes of drugs. During the 1980s those differences narrowed, as use rates declined. Figure 5-11b shows the trends for the annual prevalence of use of ***alcohol***, ***marijuana***, and ***cocaine***. It shows that the differences among the three population density strata were greatest (with large cities at the top) in the peak years of use for each drug but that, as use declined, the three strata tended to converge.

- For example, the increase in ***cocaine*** use between 1976 and 1979, although dramatic at all levels of population density, was clearly greatest in the large cities. Between 1980 and 1984, use was fairly stable in all groups, but in 1985 it showed a rise in all groups. In 1986, use stabilized again in all groups, and in 1987 it began a long-term decline. Just as the earlier rise had been greatest in the large cities, so was the decline (see Figure 5-11b). By 1991, there were only small differences by population density in cocaine use among seniors, and this remained the case through 1998. Then use started down in the large metropolitan areas a year before it did in the other two strata, resulting in some differences in usage levels. The large cities now have the lowest annual prevalence for cocaine use at twelfth grade, instead of the highest—a reversal of the differences in all of the years prior to 1989. There have been very small differences in cocaine use at the eighth- and tenth-grade levels since 1991, when data were first available.

- In the late 1980s, the use of ***crack*** among twelfth graders declined more in the large cities than in the smaller areas. Between 1986, when it was first measured among twelfth graders, and the low point in 1991, annual use was down by 4.7 percentage points (from 5.9% to 1.2%) in the large cities, by 1.8 percentage points (to 1.7%) in the other cities, and by 2.3 percentage points (to 1.2%) in the nonmetropolitan areas. In other words, the previous differences virtually disappeared. There were increases after 1991 or 1992 in all three grades, although use in the nonmetropolitan areas rose more than in the other two strata. The result has been that for the last several years, the nonmetropolitan areas have had the highest rates of crack use at all grade levels.

- There have not been large differences among these strata at eighth and tenth grades since 1991.

- In the early years of the study, ***marijuana*** use consistently had been correlated positively with community size among twelfth graders, with the greatest differences occurring in one of the peak years of usage, 1978 (Figure 5-11b). After that, both the absolute and the proportional differences diminished as use declined quite steadily through 1992. Between 1991 or 1992 and 1997, communities in all size categories showed a turnaround in marijuana use; in fact, the turnaround began a year earlier in the nonmetropolitan areas. As use increased, the difference began to re-emerge, though this time the differences are mostly between the two metropolitan strata versus the nonmetropolitan areas (which have a lower prevalence).

  At the lower grades the differences among strata have been small, and they have tended to trend in parallel.

- In general, the three levels of population density have shown fairly equivalent rates of ***heroin*** use and quite parallel trends.

- In the latter 1970s, the use of ***narcotics other than heroin*** among twelfth graders was consistently highest in the large metropolitan areas and lowest in the nonmetropolitan areas. All groups declined in use through the early 1990s, then increased again; however, the differences among groups were diminished such that by 1995 the annual prevalence for all three groups converged at 5%. All three strata showed an increase from about 1993 through 1999 or 2000. By 1999, the large metropolitan areas stayed at 5%, but the other metropolitan and the nonmetropolitan areas had both increased to 7%, thus almost reversing the differences that existed two decades earlier. However, in 2000 a continuing increase in use in the large metropolitan areas, while use held steady in the other strata, virtually eliminated the differences observed since 1996. In 2001, use in the large metropolitan areas continued to rise, whereas it declined in the other cities.

- The use of ***ice*** (crystal methamphetamine) was added to the questionnaires for seniors (only) in 1990. While use in all strata rose for some years, it rose most in the large cities, where it peaked in 1996 at a rate well above the less-urban strata. However, use in the large cities declined rapidly and since 1998 there has been little difference in use among the three strata.

- ***Barbiturate*** use is reported only for twelfth graders. The rates among the three population density strata were very close and declined very much in parallel from 1975 through 1988. Then, the large cities declined further and developed the lowest rate of use. All three strata had an increase in use in the 1990s, but the large metropolitan areas emerged in recent years with the lowest rate of use. However, the picture changed slightly in 2001; another year of data is needed to determine if this is simply a perturbation.

- Among twelfth graders, there was a greater decline in 30-day ***alcohol*** prevalence in the large cities from 1980 to 1983, which virtually eliminated the previous differences among the three strata. (See Table D-41 in Appendix D.) From 1983 to 1992 or 1993, there were essentially parallel (and substantial) declines in all three strata. Since the early 1990s, alcohol use has largely leveled out in all strata at all three grade levels. At the lower grades the trend lines have been fairly parallel and about equivalent for all three strata.

- For occasions of ***heavy drinking***, the trends for the three grades are fairly similar to those for 30-day prevalence, except that the nonmetropolitan areas have tended to have the highest rates of this behavior in the 1990s at all grade levels. This has also emerged at eighth grade with a larger increase in heavy drinking than in the other strata. It has existed consistently since 1991 at tenth grade, and it emerged at twelfth grade because the decline in heavy drinking leveled off sooner (after 1990) in the nonmetropolitan areas.

- In the early to mid-1990s, there were increases in ***cigarette*** smoking in all three strata for all three grade levels. (See Figure 5-11c and also Tables D-46 and D-47 in Appendix D.) The increases were particularly sharp and lasted longer in the nonmetropolitan areas (and also in the smaller city stratum in grades 8 and 10), thus opening up more of a difference than previously existed. In 1997, use began declining in the eighth and tenth grades in the large and smaller cities, while it continued to increase in nonmetropolitan areas. That increase continued in 1998 and 1999 in eighth grade as the other two strata continued to decline, opening quite a difference in their smoking rates. Among tenth graders a similar difference emerged, but smoking finally began to decline in 1999 in the nonmetropolitan areas, as well. In twelfth grade all three strata have shown some decline over the past four years, but still the non-urban areas clearly have the highest smoking rate.

- The remaining drugs, including ***smokeless tobacco*** and ***steroids***, show little systematic variation in trends related to population density.

Differences in Trends by Socioeconomic Status

The measure of socioeconomic status used in this study—namely, the average educational attainment level of the respondent's parents—is described in the previous chapter and in Appendix B. Five different strata are distinguished and the students are sorted into those strata based on the educational level of their parents. It should be noted that the overall average educational level of parents has been rising; thus each of the five categories contains a slowly changing proportion of the sample. Figures 5-12a through 5-12f show trends for six selected measures of drug use. Trend data, by subgroup, for the remaining drugs may be found in tabular form in Appendix D and in graphic form on our Web site, as described at the beginning of this section.

- In general there has been little change over time in the relationship between the socioeconomic status (SES) of the family of origin and prevalence of use rates for most of the drugs.

- ***Marijuana*** use, for example, has had little association with socioeconomic level throughout the life of the study, except that the lowest SES stratum consistently has had a slightly lower prevalence of use rate than all the others among twelfth graders. (This may, in fact, be due as much to a difference in the ethnic composition of this stratum, as will be seen in the next section, as to SES differences.) All levels showed similar declines in use from the late 1970s through 1992 (Figure 5-12a), and all levels showed comparable increases after 1992 in all three grades, before leveling and/or declining a bit in the late 1990s. At the eighth-grade level, there tends to be more of a negative correlation between marijuana and parental education level, and it is one that grew stronger in the mid-1990s. The same occurred in tenth grade, as well, though the differences are not as large.

- ***Cocaine*** has shown the largest and most interesting change in its association with socioeconomic status (Figure 5-12b). During the incline phase of the epidemic—from 1975 through 1981—a strong positive association evolved among high school seniors between cocaine use and SES, with the greatest increase in use occurring in the highest SES group and the least increase in the lowest SES group. From 1981 to 1985, use in the top SES levels declined some, while use in the lowest SES group increased substantially between 1982 and 1985—an increase that likely reflected the introduction of the less expensive form of cocaine, ***crack***.

  The net effect of these changes was the elimination of group differences in cocaine use; since 1985, there has been little or no systematic association between overall cocaine use and socioeconomic status. The strong positive association that existed for roughly eight years disappeared. All SES levels showed a substantial decrease in cocaine use between 1986 and 1991, with little differential change. In the upturn between about 1991 and 1997, some reversal in the relationship emerged, with the lowest SES group now having the highest use.

In the lower grades, since 1991 when data were first available, the use of both crack and other cocaine has been highest in the lowest SES level. Otherwise the differences among strata have been small. (This also has been true in twelfth grade for crack since 1992.)

- Aside from the consistent, slightly lower level of ***LSD*** use among the lowest SES group than among the four other strata, there was little association at the twelfth-grade level between SES and the use of this drug over the interval from 1975, when the study began, through about 1984 (Figure 5-12c). As the overall usage level for LSD gradually increased after 1984, a modest positive association emerged, although it diminished some in degree by the mid-1990s and was virtually erased during the downturn in use in the late 1990s. In eighth grade, the lowest socioeconomic stratum has had the highest usage level, with hardly any other differences. There have been practically no systematic differences in tenth grade by socioeconomic status.

- Little difference is observed across the five SES categories in reported use of ***inhalants***. (See Tables D-7 and D-8 in Appendix D.) There has been virtually no association in the lower grades and no systematic change in association.

- Overall, among twelfth graders, little difference has existed among the SES groups in their trends in ***amphetamine*** use (see Figure 5-12d). In earlier years (1976 through 1990), there was usually a slight curvilinear relationship, with the two lowest and the highest SES groups tending to be low in amphetamine use. From 1991 through 1995, the two or three highest SES groups had the lowest rates of amphetamine use. Since 1992, increases in use have occurred in all strata. In eighth and tenth grades, amphetamine use generally has been slightly negatively correlated with SES, and while the increases in use through 1995 or 1996 occurred in all groups, they were sharpest in the lower two strata. More recently, all strata in these grades have shown some decline in use over the last several years.

- The picture for ***alcohol*** use among high school seniors is similar to the one described earlier for marijuana: that is, there has been little difference in the 30-day prevalence rates among the SES strata except that the lowest stratum consistently has had a lower prevalence than all the others; and all strata have moved approximately in parallel. The story for ***binge drinking*** is similar (Figure 5-12e).

- At the lower grade levels, however, the story is a bit different. Binge drinking generally has been inversely correlated with SES, and the association has been strongest in the eighth grade. Trends for the various strata have generally been parallel, nonetheless.

- Prior to 1981, daily use of ***cigarettes*** among twelfth graders generally was ordinally and inversely related to SES, with each successively higher SES group smoking less (Figure 5-12f). Between 1981 and 1990, this ordinal relationship diminished substantially because (a) the two highest SES groups showed some gradual increase in use, (b) the next two strata remained unchanged, and (c) the lowest SES group showed a continuing decline in use, which brought it from the highest smoking stratum to the lowest (probably due to its racial composition, as will be discussed in the next section). The net result of this and other trends was a considerable narrowing of SES differences among twelfth-grade students. From 1992 to 1997 all strata showed an increase in daily smoking. From 1997 to 2001, there were sharp declines in smoking in the two highest SES strata and a later and slower downturn in the other strata—once again opening up a class difference. It is possible that the introduction of the Joe Camel advertising campaign in 1988 helped account for the closing of the socioeconomic gap in the late 1980s and that its termination in 1997 helped account for the reemergence of that gap. We know that between 1986 and 1997, the rise in smoking was sharper among twelfth-grade boys than among girls, and that the Camel brand was particularly popular among boys, as well as among those from the more educated strata.[47]

  In eighth and tenth grades, all strata showed an increase in their 30-day smoking rates from 1991 to 1996. The lowest SES stratum was the last to show a downturn. In eighth grade, smoking has been consistently negatively correlated with SES.

Racial/Ethnic Differences in Trends

While the three major racial/ethnic groups examined here—Whites, African Americans, and Hispanics—have quite different levels of use of some drugs, it appears that almost all drug use patterns show similar trends.[48] (Cigarette use is an exception, as discussed later.) Data have been examined here for these three groups using two-year moving averages of prevalence in order to provide smoother and more reliable trend lines. Even then, they tend to be a bit "bumpy," especially for Hispanics, for whom we have the least data and for whom there is a higher degree of clustering by school in the sample. See Appendix D for the racial/ethnic trend data on all classes of drugs and our Web site for the graphic presentation of these trends, following the directions given at the beginning of this section.

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[47] Johnston, L. D., O'Malley, P. M., Bachman, J. G., & Schulenberg, J. E. (1999). *Cigarette brand preferences among adolescents.* (Monitoring the Future Occasional Paper No. 45.) Ann Arbor, MI: Institute for Social Research.

[48] An article examining a larger set of ethnic groups used groupings of respondents from adjacent five-year intervals to obtain more reliable estimates of trends. See Bachman, J. G., Wallace, J. M. Jr., O'Malley, P. M., Johnston, L. D., Kurth, C. L., & Neighbors, H. W. (1991). Racial/ethnic differences in smoking, drinking, and illicit drug use among American high school seniors, 1976-1989. *American Journal of Public Health, 81*, 372-377. See also Wallace, J. M., Jr., Bachman J. G., O'Malley, P. M., Johnston, L. D., Schulenberg, J. S., & Cooper, S. M. (in press). Smoking, drinking and drugs: Racial/ethnic differences among American high school seniors, 1976-2000. *Public Health Reports.*

- Figure 5-13a shows the trends in annual ***marijuana*** use for the three groups and illustrates that they have moved generally in parallel—particularly during the long decline phase. Generally, among twelfth graders, Whites have had the highest level of use and African Americans the lowest, with Hispanics in between. Use fell more in the decline phase (roughly 1979-1992) among African Americans than it did in the other two groups, expanding the differences among them. But, use also rose more among African American twelfth graders in the "relapse phase" of the epidemic (roughly 1992-1997), once again narrowing the gap. Their use also leveled earlier (in 1997) then it did among Whites (in 1999). (Recall that we are using two-year averages, which slightly moves some of the inflection points from what we have been discussing previously.)

  All three groups showed a rise in marijuana use in all three grade levels in the mid-1990s, followed by a leveling or decline in the late 1990s.

  While the trends for Whites and Hispanics are quite parallel to each other, their relative positions change across grade levels. In eighth grade, Hispanics have the highest rate of use, while Whites and African Americans are similar and have a considerably lower rate. By tenth grade, Whites have rates of use almost equivalent to Hispanics, and African Americans have lower rates than either Whites or Hispanics. By twelfth grade, Whites quite consistently have had the highest rates, Hispanics slightly lower ones, and African Americans the lowest. (In 2000 there was a slight crossover between Whites and Hispanics.) We believe that differential dropout rates (Hispanics have the highest rate of dropping out) may account for much or all of these shifts in relative position across the three grade levels.

- Figure 5-13a shows the long-term trends for annual ***cocaine*** use among twelfth graders. It clearly shows that the rise in cocaine use (in 1976-1979) occurred more sharply among Whites and Hispanics than among African Americans. The decline among African Americans appears to have begun earlier but, of perhaps greatest importance, all three groups participated in the sustained decline in cocaine use after 1986. While a little difficult to discern in Figure 5-13a, twelfth-grade Hispanics halted their decline at a higher level than Whites and since then have held fairly steady, with a slight increase in use between 1995 and 1999, whereas use among Whites dropped further but began a sharper rise after 1993. By way of contrast, cocaine use by African Americans fell to very low levels by the early 1990s and stabilized there. In the lower grades there are large differences among these three racial/ethnic groups in cocaine use, with African Americans consistently reporting very low (and unchanging) rates of use, and Hispanics consistently reporting relatively high rates, with Whites in the middle. Only Whites and Hispanics showed the rise in use in the early 1990s.

- At the twelfth-grade level there was a crossover of Whites, who formerly had a slightly higher prevalence of use of ***cocaine powder***, and Hispanics. Hispanics reached higher levels of use during the peak years of the cocaine epidemic and generally have stayed higher. Also, use among Whites fell more sharply between the late 1980s and the early 1990s. The crossover did not occur for ***crack***, however; Hispanics have had the highest rate of use for that form of cocaine since the first measurement in 1987.

In the two lower grades, use of cocaine powder rose the most among Hispanics from 1991 through 1996 or 1997, whereas over the same interval, use rose some among Whites and very little among African Americans. Hispanics have had considerably higher rates of use than the other two groups at both grade levels. This is also true for the other component of the cocaine category, ***crack***. Indeed, at the lower two grade levels, the trends for these two components are very similar to each other, though the rates of use for crack are generally lower than for cocaine powder.

- At the twelfth-grade level, the rise in reported ***inhalant*** use (unadjusted for the underreporting of nitrites) occurred about equally among Whites and Hispanics from 1976 through 1995, although Hispanics consistently had a lower rate of use than Whites. African Americans, on the other hand, showed practically no increase in their already low levels of use. They now have an annual prevalence that is approximately a third (or less) that of Whites. A similar picture emerges in eighth and tenth grades, except that the increase in the early and mid-1990s among Hispanics and Whites was even steeper than the increase in twelfth grade. There have been more recent decreases among both White and Hispanic students (as well as among African Americans) in all three grades. It is clear from the data on both levels and trends that inhalant drugs have not been popular with African American teenagers. Another class of drugs that has been similarly unpopular with them is hallucinogens.

- With regard to ***LSD*** and ***hallucinogens*** in general, African Americans have consistently had far lower rates of use than Whites or Hispanics. Both Whites and Hispanics showed sharp increases in LSD use among seniors (after 1989) and among tenth graders (after 1992). Among eighth graders both groups had shown an increase (after 1992), but it was sharpest for Whites until their use began to decline in 1998, while use among Hispanics continued rising briefly. Whites have had the highest rate of hallucinogen use for the life of the study at the twelfth-grade level. In the tenth grade, Whites also have tended to have a slightly higher level of LSD use than Hispanics, but there has not been a consistent difference in eighth grade. Both Whites and Hispanics have shown a decrease in LSD use in recent years at all three grade levels, with little change occurring in the very low rates of use among African Americans.

- ***Ecstasy*** is another drug used for its hallucinogenic effects, and it has remained unpopular among African American students at all grade levels, as well. While use has risen sharply among both Whites and Hispanics, the increase among African Americans has been far less and has started from a much lower level.

- The substantial decline in the use of ***amphetamines***, which began among twelfth graders in 1982 and ran through 1992, narrowed the differences among the three ethnic groups somewhat, although all three groups showed some decline. The decline was greatest among Whites, who started with the highest rates, and least among African Americans, who started with the lowest. Hispanics have been about midway between the other two groups. Between 1992 and 2001, there has been some increase in amphetamine use among Whites and Hispanics, but little among African Americans. In the lower grades, the three groups generally have the same rank order in their levels of amphetamine use, and African American students showed little change in their low levels of use since 1991, even though the other two groups showed first an increase and then a decrease in use.

- Among twelfth graders, the use of ***barbiturates***, ***tranquilizers***, and ***narcotics other than heroin*** converged for the three racial/ethnic groups as use of these drugs declined over a fairly long period. In general, Whites consistently had the highest usage rates in senior year and also the largest declines; African Americans had the lowest rates and, therefore, the smallest absolute declines. During the period of increase in the use of these drugs in the first half of the 1990s, Whites showed the greatest increase and African Americans the least—again enlarging the difference between them. The considerable increase in the use of narcotics other than heroin that ran from 1992 to 2000 has been particularly sharp among Whites.

- The 30-day prevalence of ***alcohol*** use has shown relatively consistent racial/ethnic differences over time at each grade level. Among twelfth graders, Whites have had the highest rates, African Americans considerably lower ones, and Hispanics midway between the two. Their cross-time trends have generally been parallel, although Whites showed the greatest decline in drinking between 1988 and 1993, narrowing the difference between them and Hispanics. At tenth grade, Whites and Hispanics have generally had equivalent rates and African Americans substantially lower ones. At eighth grade, Hispanics consistently have had the highest drinking rates, while Whites have fallen in the middle, though the difference between Whites and Hispanics appears to be narrowing.

  The trends for occasional ***heavy drinking*** have been very similar to those just discussed for current drinking, though the absolute rates are lower, of course. African Americans consistently have had appreciably lower rates than the other two groups at all three grade levels. The high rates of binge drinking among Hispanic youngsters in eighth grade have been falling for a couple of years, narrowing the difference between them and Whites. (See Figure 5-13b and Tables D-40 through D-45 in Appendix D.)

- ***Cigarette*** smoking showed quite dramatic differential trends during the 1980s. Among seniors the three racial/ethnic groups had daily smoking rates that were not substantially different in the late 1970s (Figure 5-13b). All three groups showed declines between 1977 and 1981, with the declines somewhat stronger for African Americans and Hispanics, clearly leaving Whites with the highest smoking rates by 1981. After that, African Americans exhibited a consistent and continuing decline through 1993, while rates among Whites increased gradually and rates among Hispanics stayed level. By 1991, African Americans had a rate of daily smoking that was only one-fourth that of Whites. After 1992, current (30-day) smoking rose among all three ethnic groups, though the increase was clearly the greatest among Whites. In the eighth and tenth grades, all three ethnic groups showed a sharp rise in use during the 1990s, though all showed some signs of leveling or decreasing by the mid- to late 1990s. At tenth grade, the increase was sharpest among Whites, similar to twelfth-grade trends, and use among Whites has been substantially higher than among Hispanics, whose use has been substantially higher than that of African Americans. At eighth grade, the smoking rates for Whites and Hispanics have been closer (though Whites are still higher) and much higher than among African American eighth graders. At eighth and tenth grades, the downturn of the late 1990s began a year or two later among African Americans than it did among the other two groups.

- Summing across the drugs, it may be seen that African American students have the lowest rates of use of virtually all licit and illicit drugs at all three grade levels being examined here. And they have consistently had *exceptionally* low rates of use for some particular drugs, including ***inhalants***, ***hallucinogens*** taken as a class, ***LSD***, ***other hallucinogens***, and ***ecstasy.*** Further, in recent years their ***cigarette*** smoking rates also have been exceptionally low.

- In eighth grade, Hispanic students have tended to have the highest rates of use of a number of drugs, including ***marijuana***, ***crack***, ***cocaine powder***, ***heroin***, ***tranquilizers***, and ***heavy drinking***. However, by twelfth grade the differences between Hispanic and White students narrow considerably, although in 2001 Hispanic twelfth graders had higher rates of ***crack***, ***cocaine powder***, and ***heroin***. As we have said earlier, we think the fact that Hispanics have a considerably higher rate of dropping out of school may do much to explain these changes in ordering across the grade levels.

TABLE 5-1
Long-Term Trends in Lifetime Prevalence of Use of Various Drugs for Twelfth Graders

	Percentage ever used																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N (in thousands) =	*9.4*	*15.4*	*17.1*	*17.8*	*15.5*	*15.9*	*17.5*	*17.7*	*16.3*	*15.9*	*16.0*	*15.2*	*16.3*	*16.3*	*16.7*	*15.2*	*15.0*	*15.8*	*16.3*	*15.4*	*15.4*	*14.3*	*15.4*	*15.2*	*13.6*	*12.8*	*12.8*	
Any Illicit Drug[a,b]	55.2	58.3	61.6	64.1	65.1	65.4	65.6	64.4	62.9	61.6	60.6	57.6	56.6	53.9	50.9	47.9	44.1	40.7	42.9	45.6	48.4	50.8	54.3	54.1	54.7	54.0	53.9	-0.1
Any Illicit Drug Other Than Marijuana[a,b,c]	36.2	35.4	35.8	36.5	37.4	38.7	42.8	41.1	40.4	40.3	39.7	37.7	35.8	32.5	31.4	29.4	26.9	25.1	26.7	27.6	28.1	28.5	30.0	29.4	29.4	29.0	28.5	-0.5
Marijuana/Hashish	47.3	52.8	56.4	59.2	60.4	60.3	59.5	58.7	57.0	54.9	54.2	50.9	50.2	47.2	43.7	40.7	36.7	32.6	35.3	38.2	41.7	44.9	49.6	49.1	49.7	48.8	49.0	+0.2
Inhalants[d]	—	10.3	11.1	12.0	12.7	11.9	12.3	12.8	13.6	14.4	15.4	15.9	17.0	16.7	17.6	18.0	17.6	16.6	17.4	17.7	17.4	16.6	16.1	15.2	15.4	14.2	13.0	-1.2
Inhalants, Adjusted[d,e]	—	—	—	—	18.2	17.3	17.2	17.7	18.2	18.0	18.1	20.1	18.6	17.5	18.6	18.5	18.0	17.0	17.7	18.3	17.8	17.5	16.9	16.5	16.0	14.6	13.8	-0.8
Amyl/Butyl Nitrites[f,g]	—	—	—	—	11.1	11.1	10.1	9.8	8.4	8.1	7.9	8.6	4.7	3.2	3.3	2.1	1.6	1.5	1.4	1.7	1.5	1.8	2.0	2.7	1.7	0.8	1.9	+1.1s
Hallucinogens[c]	16.3	15.1	13.9	14.3	14.1	13.3	13.3	12.5	11.9	10.7	10.3	9.7	10.3	8.9	9.4	9.4	9.6	9.2	10.9	11.4	12.7	14.0	15.1	14.1	13.7	13.0	12.8	-0.2
Hallucinogens, Adjusted[c,h]	—	—	—	—	17.7	15.6	15.3	14.3	13.6	12.3	12.1	11.9	10.6	9.2	9.9	9.7	10.0	9.4	11.3	11.7	13.1	14.5	15.4	14.4	14.2	13.6	13.4	-0.2
LSD	11.3	11.0	9.8	9.7	9.5	9.3	9.8	9.6	8.9	8.0	7.5	7.2	8.4	7.7	8.3	8.7	8.8	8.6	10.3	10.5	11.7	12.6	13.6	12.6	12.2	11.1	10.9	-0.2
Hallucignogens Other Than LSD[c]	14.1	12.1	11.2	11.6	10.7	9.8	9.1	8.0	7.3	6.6	6.5	5.7	5.4	4.1	4.3	4.1	3.7	3.3	3.9	4.9	5.4	6.8	7.5	7.1	6.7	6.9	7.0	+0.1
PCP[f,g]	—	—	—	—	12.8	9.6	7.8	6.0	5.6	5.0	4.9	4.8	3.0	2.9	3.9	2.8	2.9	2.4	2.9	2.8	2.7	4.0	3.9	3.9	3.4	3.4	3.5	+0.2
MDMA (Ecstasy)[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.1	6.9	5.8	8.0	11.0	11.7	+0.7
Cocaine	9.0	9.7	10.8	12.9	15.4	15.7	16.5	16.0	16.2	16.1	17.3	16.9	15.2	12.1	10.3	9.4	7.8	6.1	6.1	5.9	6.0	7.1	8.7	9.3	9.8	8.6	8.2	-0.4
Crack[i]	—	—	—	—	—	—	—	—	—	—	—	—	5.4	4.8	4.7	3.5	3.1	2.6	2.6	3.0	3.0	3.3	3.9	4.4	4.6	3.9	3.7	-0.2
Other Cocaine[j]	—	—	—	—	—	—	—	—	—	—	—	—	14.0	12.1	8.5	8.6	7.0	5.3	5.4	5.2	5.1	6.4	8.2	8.4	8.8	7.7	7.4	-0.3
Heroin[k]	2.2	1.8	1.8	1.6	1.1	1.1	1.1	1.2	1.2	1.3	1.2	1.1	1.2	1.1	1.3	1.3	0.9	1.2	1.1	1.2	1.6	1.8	2.1	2.0	2.0	2.4	1.8	-0.6s
With a needle[l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.8	0.9	0.8	0.9	0.8	0.7	-0.1
Without a needle[l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	1.7	2.1	1.6	1.8	2.4	1.5	-0.9ss
Other Narcotics[m]	9.0	9.6	10.3	9.9	10.1	9.8	10.1	9.6	9.4	9.7	10.2	9.0	9.2	8.6	8.3	8.3	6.6	6.1	6.4	6.6	7.2	8.2	9.7	9.8	10.2	10.6	9.9	-0.8
Amphetamines[b,m]	22.3	22.6	23.0	22.9	24.2	26.4	32.2	27.9	26.9	27.9	26.2	23.4	21.6	19.8	19.1	17.5	15.4	13.9	15.1	15.7	15.3	15.3	16.5	16.4	16.3	15.6	16.2	+0.6
Methamphetamine[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.2	7.9	6.9	-0.9
Crystal Meth. (Ice)[o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.7	3.3	2.9	3.1	3.4	3.9	4.4	4.4	5.3	4.8	4.0	4.1	+0.1
Sedatives[m,p]	18.2	17.7	17.4	16.0	14.6	14.9	16.0	15.2	14.4	13.3	11.8	10.4	8.7	7.8	7.4	7.5	6.7	6.1	6.4	7.3	7.6	8.2	8.7	9.2	9.5	9.3	8.9	-0.4
Barbiturates[m]	16.9	16.2	15.6	13.7	11.8	11.0	11.3	10.3	9.9	9.9	9.2	8.4	7.4	6.7	6.5	6.8	6.2	5.5	6.3	7.0	7.4	7.6	8.1	8.7	8.9	9.2	8.7	-0.5
Methaqualone[m,p]	8.1	7.8	8.5	7.9	8.3	9.5	10.6	10.7	10.1	8.3	6.7	5.2	4.0	3.3	2.7	2.3	1.3	1.6	0.8	1.4	1.2	2.0	1.7	1.6	1.8	0.8	1.1	+0.3
Tranquilizers[c,m]	17.0	16.8	18.0	17.0	16.3	15.2	14.7	14.0	13.3	12.4	11.9	10.9	10.9	9.4	7.6	7.2	7.2	6.0	6.4	6.6	7.1	7.2	7.8	8.5	9.3	8.9	9.2	+0.4
Rohypnol[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	+0.3
Alcohol[q]	90.4	91.9	92.5	93.1	93.0	93.2	92.6	92.8	92.6	92.6	92.2	91.3	92.2	92.0	90.7	89.5	88.0	87.5	87.0	—	—	—	—	—	—	—	—	—
																			80.0	80.4	80.7	79.2	81.7	81.4	80.0	80.3	79.7	-0.6
Been Drunk[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	65.4	63.4	62.5	62.9	63.2	61.8	64.2	62.4	62.3	62.3	63.9	+1.6
Cigarettes	73.6	75.4	75.7	75.3	74.0	71.0	71.0	70.1	70.6	69.7	68.8	67.6	67.2	66.4	65.7	64.4	63.1	61.8	61.9	62.0	64.2	63.5	65.4	65.3	64.6	62.5	61.0	-1.5
Smokeless Tobacco[f,r]	—	—	—	—	—	—	—	—	—	—	—	31.4	32.2	30.4	29.2	—	—	32.4	31.0	30.7	30.9	29.8	25.3	26.2	23.4	23.1	19.7	-3.4
Steroids[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.0	2.9	2.1	2.1	2.0	2.4	2.3	1.9	2.4	2.7	2.9	2.5	3.7	+1.2s

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

Footnotes for Table 5-1 to Table 5-4

[a] Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders.

[b] Beginning in 1982 the question about amphetamine use was revised to get respondents to exclude the inappropriate reporting of nonprescription amphetamines. The prevalence of use rate dropped slightly as a result of this methodological change.

[c] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[d] Data based on four of five forms in 1976–88; N is four-fifths of N indicated. Data based on five of six forms in 1989–98; N is five-sixths of N indicated. Data based on three of six forms beginning in 1999; N is three-sixths of N indicated.

[e] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[f] Data based on one form; N is one-fifth of N indicated in 1979–88 and one-sixth of N indicated beginning in 1989.

[g] Question text changed slightly in 1987.

[h] Adjusted for underreporting of PCP. See text for details.

[i] Data based on one of five forms in 1986; N is one-fifth of N indicated. Data based on two forms in 1987–89; N is two-fifths of N indicated in 1987–88 and two-sixths of N indicated in 1989. Data based on six forms beginning in 1990.

[j] Data based on one form in 1987–89; N is one-fifth of N indicated in 1987–88 and one-sixth of N indicated in 1989. Data based on four of six forms beginning in 1990; N is four-sixths of N indicated.

[k] In 1995 the heroin question was changed in half of the questionnaire forms. Separate questions were asked for use with injection and without injection. Data presented here represent the combined data from all forms.

[l] Data based on three of six forms; N is three-sixths of N indicated.

[m] Only drug use which was not under a doctor's orders is included here.

[n] Data based on two of six forms; N is two-sixths of N indicated. Steroid data based on one of six forms in 1989–90; N is one-sixth of N indicated in 1989–90. Steroid data based on two of six forms beginning in 1991; N is two-sixths of N indicated.

[o] Data based on five forms in 1975–88, six forms in 1989, one form in 1990 (N is one-sixth of N indicated in 1990), and six forms of data adjusted by one-form data beginning in 1991.

[p] Data based on five forms in 1975–88, six forms in 1989, and one of six forms beginning in 1990; N is one-sixth of N indicated beginning in 1990.

[q] Data based on five forms in 1975–88 and on six forms in 1989–92. In 1993, the question text was changed slightly in three of six forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from the three forms using the original wording (N is three-sixths of N indicated), while the data in the lower line came from the three forms containing the revised wording (N is three-sixths of N indicated). Beginning in 1994, data based on all six forms.

[r] The prevalence of use of smokeless tobacco was not asked of twelfth graders in 1990 and 1991. Prior to 1990 the prevalence of use question on smokeless tobacco was located near the end of one twelfth-grade questionnaire form, whereas after 1991 the question was placed earlier and in a different form. This shift could explain the discontinuities between the corresponding data.

[s] Data based on two of six forms in 2000; N is two-sixths of N indicated. Data based on three of six forms beginning in 2001; N is three-sixths of N indicated.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 5-2
Long-Term Trends in Annual Prevalence of Use of Various Drugs for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N (in thousands) =	*9.4*	*15.4*	*17.1*	*17.8*	*15.5*	*15.9*	*17.5*	*17.7*	*16.3*	*15.9*	*16.0*	*15.2*	*16.3*	*16.3*	*16.7*	*15.2*	*15.0*	*15.8*	*16.3*	*15.4*	*15.4*	*14.3*	*15.4*	*15.2*	*13.6*	*12.8*	*12.8*	
Any Illicit Drug[a,b]	45.0	48.1	51.1	53.8	54.2	53.1	52.1	49.4	47.4	45.8	46.3	44.3	41.7	38.5	35.4	32.5	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	+0.6
Any Illicit Drug Other Than Marijuana[a,b,c]	26.2	25.4	26.0	27.1	28.2	30.4	34.0	30.1	28.4	28.0	27.4	25.9	24.1	21.1	20.0	17.9	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4	19.8	-0.6
Marijuana/Hashish	40.0	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	+0.5
Inhalants[d]	—	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	6.1	6.9	6.5	5.9	6.9	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	-1.4s
Inhalants, Adjusted[d,e]	—	—	—	—	8.9	7.9	6.1	6.6	6.2	7.2	7.5	8.9	8.1	7.1	6.9	7.5	6.9	6.4	7.4	8.2	8.4	8.5	7.3	7.1	6.0	6.2	4.9	-1.4
Amyl/Butyl Nitrites[f,g]	—	—	—	—	6.5	5.7	3.7	3.6	3.6	4.0	4.0	4.7	2.6	1.7	1.7	1.4	0.9	0.5	0.9	1.1	1.1	1.6	1.2	1.4	0.9	0.6	0.6	0.0
Hallucinogens[c]	11.2	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	6.0	6.4	5.5	5.6	5.9	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1	8.4	+0.2
Hallucinogens Adjusted[c,h]	—	—	—	—	11.8	10.4	10.1	9.0	8.3	7.3	7.6	7.6	6.7	5.8	6.2	6.0	6.1	6.2	7.8	7.8	9.7	10.7	10.0	9.2	9.8	8.7	9.0	+0.3
LSD	7.2	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	4.5	5.2	4.8	4.9	5.4	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	0.0
Hallucinogens Other Than LSD[c]	9.4	7.0	6.9	7.3	6.8	6.2	5.6	4.7	4.1	3.8	3.6	3.0	3.2	2.1	2.2	2.1	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4	4.4	0.0
PCP[f,g]	—	—	—	—	7.0	4.4	3.2	2.2	2.6	2.3	2.9	2.4	1.3	1.2	2.4	1.2	1.4	1.4	1.4	1.6	1.8	2.6	2.3	2.1	1.8	2.3	1.8	-0.5
MDMA (Ecstasy)[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	+1.0
Cocaine	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	-0.1
Crack[i]	—	—	—	—	—	—	—	—	—	—	—	4.1	3.9	3.1	3.1	1.9	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	0.0
Other Cocaine[j]	—	—	—	—	—	—	—	—	—	—	—	—	9.8	7.4	5.2	4.6	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	-0.1
Heroin[k]	1.0	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	-0.6sss
With a needle[l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	-0.1
Without a needle[l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	-0.8sss
Other Narcotics[m]	5.7	5.7	6.4	6.0	6.2	6.3	5.9	5.3	5.1	5.2	5.9	5.2	5.3	4.6	4.4	4.5	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7	-0.2
Amphetamines[b,m]	16.2	15.8	16.3	17.1	18.3	20.8	26.0	20.3	17.9	17.7	15.8	13.4	12.2	10.9	10.8	9.1	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	+0.4
Methamphetamine[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.7	4.3	3.9	-0.4
Crystal Meth (Ice)[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	+0.3
Sedatives[m,o]	11.7	10.7	10.8	9.9	9.9	10.3	10.5	9.1	7.9	6.6	5.8	5.2	4.1	3.7	3.7	3.6	3.6	2.9	3.4	4.2	4.9	5.3	5.4	6.0	6.3	6.3	5.9	-0.3
Barbiturates[m]	10.7	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	4.2	3.6	3.2	3.3	3.4	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	-0.5
Methaqualone[m,p]	5.1	4.7	5.2	4.9	5.9	7.2	7.6	6.8	5.4	3.8	2.8	2.1	1.5	1.3	1.3	0.7	0.5	0.6	0.2	0.8	0.7	1.1	1.0	1.1	1.1	0.3	0.8	+0.4
Tranquilizers[c,m]	10.6	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	5.8	5.5	4.8	3.8	3.5	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7	6.5	+0.8
Rohypnol[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9	+0.2
GHB[s]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	1.6	-0.2
Ketamine[s]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.5	0.0
Alcohol[q]	84.8	85.7	87.0	87.7	88.1	87.9	87.0	86.8	87.3	86.0	85.6	84.5	85.7	85.3	82.7	80.6	77.7	76.8	76.0	—	—	—	—	—	—	—	—	—
																			72.7	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3	+0.1
Been Drunk[s]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	+1.4
Cigarettes	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Bidis[s]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.2	7.0	-2.2s
Kreteks[s]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	10.1	—
Smokeless Tobacco[f,r]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Steroids[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	1.7	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	+0.7s

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. See Table 5-1 for relevant footnotes.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 5-3
Long-Term Trends in Thirty-Day Prevalence of Use of Various Drugs for Twelfth Graders

	Percentage who used in last thirty days																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N (in thousands) =	*9.4*	*15.4*	*17.1*	*17.8*	*15.5*	*15.9*	*17.5*	*17.7*	*16.3*	*15.9*	*16.0*	*15.2*	*16.3*	*16.3*	*16.7*	*15.2*	*15.0*	*15.8*	*16.3*	*15.4*	*15.4*	*14.3*	*15.4*	*15.2*	*13.6*	*12.8*	*12.8*	
Any Illicit Drug[a,b]	30.7	34.2	37.6	38.9	38.9	37.2	36.9	32.5	30.5	29.2	29.7	27.1	24.7	21.3	19.7	17.2	16.4	14.4	18.3	21.9	23.8	24.6	26.2	25.6	25.9	24.9	25.7	+0.8
Any Illicit Drug Other Than Marijuana[a,b,c]	15.4	13.9	15.2	15.1	16.8	18.4	21.7	17.0	15.4	15.1	14.9	13.2	11.6	10.0	9.1	8.0	7.1	6.3	7.9	8.8	10.0	9.5	10.7	10.7	10.4	10.4	10.8	+0.4
Marijuana/Hashish	27.1	32.2	35.4	37.1	36.5	33.7	31.6	28.5	27.0	25.2	25.7	23.4	21.0	18.0	16.7	14.0	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	+0.8
Inhalants[d]	—	0.9	1.3	1.5	1.7	1.4	1.5	1.5	1.7	1.9	2.2	2.5	2.8	2.6	2.3	2.7	2.4	2.3	2.5	2.7	3.2	2.5	2.5	2.3	2.0	2.2	1.7	-0.5
Inhalants, Adjusted[d,e]	—	—	—	—	3.2	2.7	2.5	2.5	2.5	2.6	3.0	3.2	3.5	3.0	2.7	2.9	2.6	2.5	2.8	2.9	3.5	2.9	2.9	3.1	2.4	2.4	2.1	-0.3
Amyl/Butyl Nitrites[f,g]	—	—	—	—	2.4	1.8	1.4	1.1	1.4	1.4	1.6	1.3	1.3	0.6	0.6	0.6	0.4	0.3	0.6	0.4	0.4	0.7	0.7	1.0	0.4	0.3	0.5	+0.2
Hallucinogens[c]	4.7	3.4	4.1	3.9	4.0	3.7	3.7	3.4	2.8	2.6	2.5	2.5	2.5	2.2	2.2	2.2	2.2	2.1	2.7	3.1	4.4	3.5	3.9	3.8	3.5	2.6	3.2	+0.6
Hallucinogens, Adjusted[e,h]	—	—	—	—	5.3	4.4	4.5	4.1	3.5	3.2	3.8	3.5	2.8	2.3	2.9	2.3	2.4	2.3	3.3	3.2	4.6	3.8	4.1	4.1	3.9	3.0	3.4	+0.4
LSD	2.3	1.9	2.1	2.1	2.4	2.3	2.5	2.4	1.9	1.5	1.6	1.7	1.8	1.8	1.8	1.9	1.9	2.0	2.4	2.6	4.0	2.5	3.1	3.2	2.7	1.6	2.3	+0.7s
Hallucinogens Other Than LSD[c]	3.7	2.3	3.0	2.7	2.4	2.3	2.1	1.7	1.5	1.6	1.3	1.3	1.1	0.7	0.8	0.8	0.7	0.5	0.8	1.2	1.3	1.6	1.7	1.6	1.6	1.7	1.8	+0.1
PCP[f,g]	—	—	—	—	2.4	1.4	1.4	1.0	1.3	1.0	1.6	1.3	0.6	0.3	1.4	0.4	0.5	0.6	1.0	0.7	0.6	1.3	0.7	1.0	0.8	0.9	0.5	-0.4
MDMA (Ecstasy)[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	1.6	1.5	2.5	3.6	2.8	-0.9
Cocaine	1.9	2.0	2.9	3.9	5.7	5.2	5.8	5.0	4.9	5.8	6.7	6.2	4.3	3.4	2.8	1.9	1.4	1.3	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.1	2.1	-0.1
Crack[i]	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.6	1.4	0.7	0.7	0.6	0.7	0.8	1.0	1.0	0.9	1.0	1.1	1.0	1.1	+0.1
Other Cocaine[j]	—	—	—	—	—	—	—	—	—	—	—	—	4.1	3.2	1.9	1.7	1.2	1.0	1.2	1.3	1.3	1.6	2.0	2.0	2.5	1.7	1.8	+0.1
Heroin[k]	0.4	0.2	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.2	0.2	0.2	0.3	0.2	0.2	0.3	0.2	0.3	0.6	0.5	0.5	0.5	0.5	0.7	0.4	-0.3ss
With a needle[l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	-0.1
Without a needle[l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	-0.3s
Other Narcotics[m]	2.1	2.0	2.8	2.1	2.4	2.4	2.1	1.8	1.8	1.8	2.3	2.0	1.8	1.6	1.6	1.5	1.1	1.2	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.9	3.0	0.0
Amphetamines[b,m]	8.5	7.7	8.8	8.7	9.9	12.1	15.8	10.7	8.9	8.3	6.8	5.5	5.2	4.6	4.2	3.7	3.2	2.8	3.7	4.0	4.0	4.1	4.8	4.6	4.5	5.0	5.6	+0.6
Methamphetamine[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	1.9	1.5	-0.4
Crystal Meth. (Ice)[g]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.6	0.5	0.6	0.7	1.1	1.1	0.8	1.2	0.8	1.0	1.1	+0.1
Sedatives[m,o]	5.4	4.5	5.1	4.2	4.4	4.8	4.6	3.4	3.0	2.3	2.4	2.2	1.7	1.4	1.6	1.4	1.5	1.2	1.3	1.8	2.3	2.3	2.1	2.8	2.8	3.1	3.0	-0.1
Barbiturates[m]	4.7	3.9	4.3	3.2	3.2	2.9	2.6	2.0	2.1	1.7	2.0	1.8	1.4	1.2	1.4	1.3	1.4	1.1	1.3	1.7	2.2	2.1	2.1	2.6	2.6	3.0	2.8	-0.2
Methaqualone[m,p]	2.1	1.6	2.3	1.9	2.3	3.3	3.1	2.4	1.8	1.1	1.0	0.8	0.6	0.5	0.6	0.2	0.2	0.4	0.1	0.4	0.4	0.6	0.3	0.6	0.4	0.2	0.5	+0.4
Tranquilizers[c,m]	4.1	4.0	4.6	3.4	3.7	3.1	2.7	2.4	2.5	2.1	2.1	2.1	2.0	1.5	1.3	1.2	1.4	1.0	1.2	1.4	1.8	2.0	1.8	2.4	2.5	2.6	3.0	+0.4
Rohypnol[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	-0.1
Alcohol[q]	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1	54.0	51.3	51.0	—	—	—	—	—	—	—	—	—
																			48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	-0.3
Been Drunk[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	+0.4
Cigarettes	36.7	38.8	38.4	36.7	34.4	30.5	29.4	30.0	30.3	29.3	30.1	29.6	29.4	28.7	28.6	29.4	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	-2.0
Smokeless Tobacco[f,r]	—	—	—	—	—	—	—	—	—	—	—	11.5	11.3	10.3	8.4	—	—	11.4	10.7	11.1	12.2	9.8	9.7	8.8	8.4	7.6	7.8	+0.2
Steroids[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	0.8	0.6	0.7	0.9	0.7	0.7	1.0	1.1	0.9	0.8	1.3	+0.5s

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. See Table 5-1 for relevant footnotes.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 5-4
Long-Term Trends in Thirty-Day Prevalence of Daily Use of Various Drugs for Twelfth Graders

	Percentage who used daily in last thirty days																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N (in thousands) =	*9.4*	*15.4*	*17.1*	*17.8*	*15.5*	*15.9*	*17.5*	*17.7*	*16.3*	*15.9*	*16.0*	*15.2*	*16.3*	*16.3*	*16.7*	*15.2*	*15.0*	*15.8*	*16.3*	*15.4*	*15.4*	*14.3*	*15.4*	*15.2*	*13.6*	*12.8*	*12.8*	
Marijuana/Hashish	6.0	8.2	9.1	10.7	10.3	9.1	7.0	6.3	5.5	5.0	4.9	4.0	3.3	2.7	2.9	2.2	2.0	1.9	2.4	3.6	4.6	4.9	5.8	5.6	6.0	6.0	5.8	-0.2
Inhalants[c]	—	*	*	0.1	*	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.1	0.2	0.2	0.3	0.2	0.1	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.2	0.1	-0.1
Inhalants, Adjusted[c,e]	—	—	—	—	0.1	0.2	0.2	0.2	0.2	0.2	0.4	0.4	0.4	0.3	0.3	0.3	0.5	0.2	0.2	—	—	0.4	0.2	0.9	0.3	0.3	0.1	-0.1
Amyl/Butyl Nitrites[f,d]	—	—	—	—	*	0.1	0.1	0.0	0.2	0.1	0.3	0.5	0.3	0.1	0.3	0.1	0.2	0.1	0.1	0.2	0.2	0.4	0.1	0.3	0.2	*	0.1	0.0
Hallucinogens[c]	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.1	0.1	0.2	0.2	+0.1
Hallucinogens, Adjusted[c,h]	—	—	—	—	0.2	0.2	0.1	0.2	0.2	0.2	0.3	0.3	0.2	*	0.3	0.3	0.1	0.1	0.1	—	—	0.4	0.4	0.8	0.2	0.2	0.3	+0.1
LSD	*	*	*	*	*	*	0.1	*	0.1	0.1	0.1	*	0.1	*	*	0.1	0.1	0.1	0.1	0.1	0.1	*	0.2	0.1	0.1	0.1	0.2	0.0
Hallucinogens Other Than LSD[c]	—	0.1	0.1	*	*	*	0.1	*	*	0.1	*	*	*	*	*	*	*	*	*	*	0.1	0.1	0.1	0.1	*	0.1	0.1	0.0
PCP[f,g]	—	—	—	—	0.1	0.1	0.1	0.1	0.1	0.1	0.3	0.2	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.3	0.3	0.3	0.1	0.3	0.2	0.2	0.1	-0.2
MDMA (Ecstasy)[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.0	0.1	0.2	0.1	*	0.2	+0.2s
Cocaine	0.1	0.1	0.1	0.1	0.2	0.2	0.3	0.2	0.2	0.2	0.4	0.4	0.3	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.2	0.2	0.2	0.2	0.2	0.2	0.1	-0.1
Crack[f]	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	-0.1
Other Cocaine[i]	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.2	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	-0.1
Heroin[k]	0.1	*	*	*	*	*	*	*	0.1	*	*	*	*	*	0.1	*	*	*	*	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.0
With a needle[l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.2	0.1	*	*	*	*	0.0
Without a needle[l]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	*	0.1	0.1	0.0	0.0	*	*	0.0
Other Narcotics[m]	0.1	0.1	0.2	0.1	*	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.2	0.1	0.1	*	*	0.1	0.1	0.2	0.2	0.1	0.2	0.1	0.2	0.0
Amphetamines[b,m]	0.5	0.4	0.5	0.5	0.6	0.7	1.2	0.7	0.8	0.6	0.4	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.2	0.3	0.3	0.3	0.3	0.3	0.5	0.5	+0.1
Methamphetamine[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.1	0.0
Crystal Meth. (Ice)[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	*	*	0.1	0.2	+0.1
Sedatives[m,o]	0.3	0.2	0.2	0.2	0.1	0.2	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0
Barbiturates[m]	0.1	0.1	0.2	0.1	*	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	*	0.1	0.1	0.1	*	0.1	*	0.1	0.1	0.1	0.1	0.2	0.1	0.1	0.0
Methaqualone[m,p]	*	*	*	*	*	0.1	0.1	0.1	*	*	*	*	*	0.1	*	*	*	0.1	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0
Tranquilizers[b,m]	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.1	0.1	0.1	*	*	0.1	*	0.1	0.1	0.1	*	*	0.1	*	0.2	0.1	0.1	0.1	0.1	*	0.0
Rohypnol[f]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.0	0.1	0.1	0.1	*	-0.1
Alcohol																												
Daily[q]	5.7	5.6	6.1	5.7	6.9	6.0	6.0	5.7	5.5	4.8	5.0	4.8	4.8	4.2	4.2	3.7	3.6	3.4	2.5 3.4	— 2.9	— 3.5	— 3.7	— 3.9	— 3.9	— 3.4	— 2.9	— 3.6	— +0.7ss
Been drunk daily[n]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	0.8	0.9	1.2	1.3	1.6	2.0	1.5	1.9	1.7	1.4	-0.3
5+ drinks in a row in last 2 weeks	36.8	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	38.7	36.7	36.8	37.5	34.7	33.0	32.2	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	-0.3
Cigarettes																												
Daily	26.9	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	18.7	19.5	18.7	18.7	18.1	18.9	19.1	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	-1.6
Half-pack or more per day	17.9	19.2	19.4	18.8	16.5	14.3	13.5	14.2	13.8	12.3	12.5	11.4	11.4	10.6	11.2	11.3	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	-1.0
Smokeless Tobacco[r,s]	—	—	—	—	—	—	—	—	—	—	—	4.7	5.1	4.3	3.3	—	—	4.3	3.3	3.9	3.6	3.3	4.4	3.2	2.9	3.2	2.8	-0.4
Steroids[o]	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.2	0.1	0.1	0.1	0.4	0.2	0.3	0.3	0.3	0.2	0.2	0.2	0.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
'*' indicates less than .05 percent but greater than 0 percent. See Table 5-1 for relevant footnotes.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
Daily use is defined as use on 20 or more occasions in the past 30 days except for 5+ drinks, cigarettes, and smokeless tobacco, for which actual daily use is measured.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 5-5a
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders
(Entries are percentages)

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Marijuana/Hashish												
8th Grade	10.2	11.2	12.6	16.7	19.9	23.1	22.6	22.2	22.0	20.3	20.4	+0.1
10th Grade	23.4	21.4	24.4	30.4	34.1	39.8	42.3	39.6	40.9	40.3	40.1	-0.2
12th Grade	36.7	32.6	35.3	38.2	41.7	44.9	49.6	49.1	49.7	48.8	49.0	+0.2
Inhalants[a,b]												
8th Grade	17.6	17.4	19.4	19.9	21.6	21.2	21.0	20.5	19.7	17.9	17.1	-0.8
10th Grade	15.7	16.6	17.5	18.0	19.0	19.3	18.3	18.3	17.0	16.6	15.2	-1.4
12th Grade	17.6	16.6	17.4	17.7	17.4	16.6	16.1	15.2	15.4	14.2	13.0	-1.2
Nitrites[c]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.6	1.5	1.4	1.7	1.5	1.8	2.0	2.7	1.7	0.8	1.9	+1.1s
Hallucinogens[b,d]												
8th Grade	3.2	3.8	3.9	4.3	5.2	5.9	5.4	4.9	4.8	4.6	4.0	-0.7
10th Grade	6.1	6.4	6.8	8.1	9.3	10.5	10.5	9.8	9.7	8.9	7.8	-1.1
12th Grade	9.6	9.2	10.9	11.4	12.7	14.0	15.1	14.1	13.7	13.0	12.8	-0.2
LSD												
8th Grade	2.7	3.2	3.5	3.7	4.4	5.1	4.7	4.1	4.1	3.9	3.4	-0.4
10th Grade	5.6	5.8	6.2	7.2	8.4	9.4	9.5	8.5	8.5	7.6	6.3	-1.2
12th Grade	8.8	8.6	10.3	10.5	11.7	12.6	13.6	12.6	12.2	11.1	10.9	-0.2
Hallucinogens Other Than LSD[d]												
8th Grade	1.4	1.7	1.7	2.2	2.5	3.0	2.6	2.5	2.4	2.3	1.8	-0.5
10th Grade	2.2	2.5	2.8	3.8	3.9	4.7	4.8	5.0	4.7	4.8	4.0	-0.8
12th Grade	3.7	3.3	3.9	4.9	5.4	6.8	7.5	7.1	6.7	6.9	7.0	+0.1
PCP[c]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	2.9	2.4	2.9	2.8	2.7	4.0	3.9	3.9	3.4	3.4	3.5	+0.2
MDMA (Ecstasy)[c,e]												
8th Grade	—	—	—	—	—	3.4	3.2	2.7	2.7	4.3	5.2	+1.0
10th Grade	—	—	—	—	—	5.6	5.7	5.1	6.0	7.3	8.0	+0.7
12th Grade	—	—	—	—	—	6.1	6.9	5.8	8.0	11.0	11.7	+0.7
Cocaine												
8th Grade	2.3	2.9	2.9	3.6	4.2	4.5	4.4	4.6	4.7	4.5	4.3	-0.2
10th Grade	4.1	3.3	3.6	4.3	5.0	6.5	7.1	7.2	7.7	6.9	5.7	-1.2s
12th Grade	7.8	6.1	6.1	5.9	6.0	7.1	8.7	9.3	9.8	8.6	8.2	-0.4
Crack												
8th Grade	1.3	1.6	1.7	2.4	2.7	2.9	2.7	3.2	3.1	3.1	3.0	-0.2
10th Grade	1.7	1.5	1.8	2.1	2.8	3.3	3.6	3.9	4.0	3.7	3.1	-0.6s
12th Grade	3.1	2.6	2.6	3.0	3.0	3.3	3.9	4.4	4.6	3.9	3.7	-0.2

(Table continued on next page)

TABLE 5-5a (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders

	Lifetime											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Other Cocaine[f]												
8th Grade	2.0	2.4	2.4	3.0	3.4	3.8	3.5	3.7	3.8	3.5	3.3	-0.2
10th Grade	3.8	3.0	3.3	3.8	4.4	5.5	6.1	6.4	6.8	6.0	5.0	-1.1
12th Grade	7.0	5.3	5.4	5.2	5.1	6.4	8.2	8.4	8.8	7.7	7.4	-0.3
Heroin[g]												
8th Grade	1.2	1.4	1.4	2.0	2.3	2.4	2.1	2.3	2.3	1.9	1.7	-0.2
10th Grade	1.2	1.2	1.3	1.5	1.7	2.1	2.1	2.3	2.3	2.2	1.7	-0.6s
12th Grade	0.9	1.2	1.1	1.2	1.6	1.8	2.1	2.0	2.0	2.4	1.8	-0.6s
With a needle[h]												
8th Grade	—	—	—	—	1.5	1.6	1.3	1.4	1.6	1.1	1.2	0.0
10th Grade	—	—	—	—	1.0	1.1	1.1	1.2	1.3	1.0	0.8	-0.2
12th Grade	—	—	—	—	0.7	0.8	0.9	0.8	0.9	0.8	0.7	-0.1
Without a needle[h]												
8th Grade	—	—	—	—	1.5	1.6	1.4	1.5	1.4	1.3	1.1	-0.2
10th Grade	—	—	—	—	1.1	1.7	1.7	1.7	1.6	1.7	1.3	-0.4s
12th Grade	—	—	—	—	1.4	1.7	2.1	1.6	1.8	2.4	1.5	-0.9ss
Other Narcotics[i]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.6	6.1	6.4	6.6	7.2	8.2	9.7	9.8	10.2	10.6	9.9	-0.8
Amphetamines[j]												
8th Grade	10.5	10.8	11.8	12.3	13.1	13.5	12.3	11.3	10.7	9.9	10.2	+0.3
10th Grade	13.2	13.1	14.9	15.1	17.4	17.7	17.0	16.0	15.7	15.7	16.0	+0.3
12th Grade	15.4	13.9	15.1	15.7	15.3	15.3	16.5	16.4	16.3	15.6	16.2	+0.6
Methamphetamine[j,k]												
8th Grade	—	—	—	—	—	—	—	—	4.5	4.2	4.4	+0.2
10th Grade	—	—	—	—	—	—	—	—	7.3	6.9	6.4	-0.5
12th Grade	—	—	—	—	—	—	—	—	8.2	7.9	6.9	-0.9
Ice[k]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.3	2.9	3.1	3.4	3.9	4.4	4.4	5.3	4.8	4.0	4.1	+0.1
Barbiturates[i]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	6.2	5.5	6.3	7.0	7.4	7.6	8.1	8.7	8.9	9.2	8.7	-0.5
Methaqualone[c,i]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.3	1.6	0.8	1.4	1.2	2.0	1.7	1.6	1.8	0.8	1.1	+0.3
Tranquilizers[i,j]												
8th Grade	3.8	4.1	4.4	4.6	4.5	5.3	4.8	4.6	4.4	4.4	4.7	+0.3
10th Grade	5.8	5.9	5.7	5.4	6.0	7.1	7.3	7.8	7.9	8.0	8.1	+0.1
12th Grade	7.2	6.0	6.4	6.6	7.1	7.2	7.8	8.5	9.3	8.9	9.2	+0.4

(Table continued on next page)

TABLE 5-5a (cont.)
Trends in Lifetime Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders

	Lifetime											'00–'01
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	change
Rohypnol[c,m]												
8th Grade	—	—	—	—	—	1.5	1.1	1.4	1.3	1.0	1.1	+0.1
10th Grade	—	—	—	—	—	1.5	1.7	2.0	1.8	1.3	1.5	+0.2
12th Grade	—	—	—	—	—	1.2	1.8	3.0	2.0	1.5	1.7	+0.3
GHB[j,n]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—
Ketamine[j,n]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol[o]												
Any use												
8th Grade	70.1	69.3	67.1	—	—	—	—	—	—	—	—	—
			55.7	55.8	54.5	55.3	53.8	52.5	52.1	51.7	50.5	-1.2
10th Grade	83.8	82.3	80.8	—	—	—	—	—	—	—	—	—
			71.6	71.1	70.5	71.8	72.0	69.8	70.6	71.4	70.1	-1.3
12th Grade	88.0	87.5	87.0	—	—	—	—	—	—	—	—	—
			80.0	80.4	80.7	79.2	81.7	81.4	80.0	80.3	79.7	-0.6
Been Drunk[k]												
8th Grade	26.7	26.8	26.4	25.9	25.3	26.8	25.2	24.8	24.8	25.1	23.4	-1.7
10th Grade	50.0	47.7	47.9	47.2	46.9	48.5	49.4	46.7	48.9	49.3	48.2	-1.1
12th Grade	65.4	63.4	62.5	62.9	63.2	61.8	64.2	62.4	62.3	62.3	63.9	+1.6
Cigarettes												
Any use												
8th Grade	44.0	45.2	45.3	46.1	46.4	49.2	47.3	45.7	44.1	40.5	36.6	-3.9sss
10th Grade	55.1	53.5	56.3	56.9	57.6	61.2	60.2	57.7	57.6	55.1	52.8	-2.3s
12th Grade	63.1	61.8	61.9	62.0	64.2	63.5	65.4	65.3	64.6	62.5	61.0	-1.5
Bidis[j,k]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—
Kreteks[j,k]												
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco[c,p]												
8th Grade	22.2	20.7	18.7	19.9	20.0	20.4	16.8	15.0	14.4	12.8	11.7	-1.1
10th Grade	28.2	26.6	28.1	29.2	27.6	27.4	26.3	22.7	20.4	19.1	19.5	+0.4
12th Grade	—	32.4	31.0	30.7	30.9	29.8	25.3	26.2	23.4	23.1	19.7	-3.4
Steroids[k]												
8th Grade	1.9	1.7	1.6	2.0	2.0	1.8	1.8	2.3	2.7	3.0	2.8	-0.2
10th Grade	1.8	1.7	1.7	1.8	2.0	1.8	2.0	2.0	2.7	3.5	3.5	0.0
12th Grade	2.1	2.1	2.0	2.4	2.3	1.9	2.4	2.7	2.9	2.5	3.7	+1.2s

Footnotes for Table 5-5a to Table 5-5c

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
'—' indicates data not available. '*' indicates less than .05 percent but greater than 0 percent.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

Approximate Weighted Ns	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
8th Graders	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200
10th Graders	14,800	14,800	15,300	15,800	17,000	15,600	15,500	15,000	13,600	14,300	14,000
12th Graders	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] 12th grade only: Data based on five of six forms in 1991–98; N is five-sixths of N indicated. Data based on three of six forms beginning in 1999; N is three-sixths of N indicated.

[b] 12th grade only: Unadjusted for underreporting of certain drugs. See text for details.

[c] 12th grade only: Data based on one of six forms; N is one-sixth of N indicated.

[d] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drug other than marijuana" and "hallucinogens" are also affected by these changes.

[e] 8th and 10th grade only: Data based one of two forms in 1996; N is one-half of N indicated. Beginning in 1997, data based on one-third of N indicated due to changes in the questionnaire forms.

[f] 12th grade only: Data based on four of six forms; N is four-sixths of N indicated.

[g] In 1995, the heroin question was changed in three of six forms for 12th graders and in one of two forms for 8th and 10th graders. Separate questions were asked for use with injection and without injection. Data presented here represent the combined data from all forms. In 1996, the heroin question was changed in all remaining 8th and 10th grade forms.

[h] For 8th and 10th graders only: Data based on one of two forms in 1995; N is one-half of N indicated. Data based on all forms beginning in 1996. For 12th graders only: Data based on three of six forms; N is three-sixths of N indicated.

[i] 12th grade only: Only drug use which was not under a doctor's orders is included here.

[j] For 8th and 10th graders only: Data based on one of four forms; N is one-third of N indicated.

[k] 12th grade only: Data based on two of six forms; N is two-sixths of N indicated.

[l] In 2001 the question text was changed on half of the questionnaire forms for each grade. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drug other than marijuana" are also affected by these changes.

[m] For 8th and 10th graders only: Data based on one of two forms in 1996; N is one-half of N indicated. Data based on three of four forms in 1997–98; N is two-thirds of N indicated. Data based on two of four forms beginning in 1999; N is one-third of N indicated.

[n] 12th grade only: Data based on two of six forms in 2000; N is two-sixths of N indicated. Data based on three of six forms beginning in 2001; N is three-sixths of N indicated.

[o] In 1993, the question text was changed slightly in some forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from forms using the old wording, while the data in the lower line came from forms using the revised wording. For 1993 only: Data based on one of two forms for 8th and 10th grades and on three of six forms for 12th grade. N is one-half of N indicated. Beginning in 1994, data were based on all forms for all grades.

[p] 8th and 10th grade only: Data based on one of two forms for 1991–96 and on two of four forms beginning in 1997; N is one-half of N indicated.

[q] Daily use is defined as use on twenty or more occasions in the past thirty days except for cigarettes and smokeless tobacco, for which actual daily use is measured, and for 5+ drinks, for which the prevalence or having five or more drinks in a row in the last two weeks is measured.

TABLE 5-5b

Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders

(Entries are percentages)

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Marijuana/Hashish																								
8th Grade	6.2	7.2	9.2	13.0	15.8	18.3	17.7	16.9	16.5	15.6	15.4	-0.1	3.2	3.7	5.1	7.8	9.1	11.3	10.2	9.7	9.7	9.1	9.2	+0.1
10th Grade	16.5	15.2	19.2	25.2	28.7	33.6	34.8	31.1	32.1	32.2	32.7	+0.5	8.7	8.1	10.9	15.8	17.2	20.4	20.5	18.7	19.4	19.7	19.8	0.0
12th Grade	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	+0.5	13.8	11.9	15.5	19.0	21.2	21.9	23.7	22.8	23.1	21.6	22.4	+0.8
Inhalants[a,b]																								
8th Grade	9.0	9.5	11.0	11.7	12.8	12.2	11.8	11.1	10.3	9.4	9.1	-0.3	4.4	4.7	5.4	5.6	6.1	5.8	5.6	4.8	5.0	4.5	4.0	-0.5
10th Grade	7.1	7.5	8.4	9.1	9.6	9.5	8.7	8.0	7.2	7.3	6.6	-0.7	2.7	2.7	3.3	3.6	3.5	3.3	3.0	2.9	2.6	2.6	2.4	-0.1
12th Grade	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	-1.4s	2.4	2.3	2.5	2.7	3.2	2.5	2.5	2.3	2.0	2.2	1.7	-0.5
Nitrites[c]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.9	0.5	0.9	1.1	1.1	1.6	1.2	1.4	0.9	0.6	0.6	0.0	0.4	0.3	0.6	0.4	0.4	0.7	0.7	1.0	0.4	0.3	0.5	+0.2
Hallucinogens[b,d]																								
8th Grade	1.9	2.5	2.6	2.7	3.6	4.1	3.7	3.4	2.9	2.8	2.5	-0.4	0.8	1.1	1.2	1.3	1.7	1.9	1.8	1.4	1.3	1.2	1.2	0.0
10th Grade	4.0	4.3	4.7	5.8	7.2	7.8	7.6	6.9	6.9	6.1	5.2	-0.9	1.6	1.8	1.9	2.4	3.3	2.8	3.3	3.2	2.9	2.3	2.1	-0.2
12th Grade	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1	8.4	+0.2	2.2	2.1	2.7	3.1	4.4	3.5	3.9	3.8	3.5	2.6	3.2	+0.6
LSD																								
8th Grade	1.7	2.1	2.3	2.4	3.2	3.5	3.2	2.8	2.4	2.4	2.2	-0.3	0.6	0.9	1.0	1.1	1.4	1.5	1.5	1.1	1.1	1.0	1.0	0.0
10th Grade	3.7	4.0	4.2	5.2	6.5	6.9	6.7	5.9	6.0	5.1	4.1	-1.0s	1.5	1.6	1.6	2.0	3.0	2.4	2.8	2.7	2.3	1.6	1.5	-0.2
12th Grade	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	0.0	1.9	2.0	2.4	2.6	4.0	2.5	3.1	3.2	2.7	1.6	2.3	+0.7s
Hallucinogens Other Than LSD[d]																								
8th Grade	0.7	1.1	1.0	1.3	1.7	2.0	1.8	1.6	1.5	1.4	1.1	-0.3	0.3	0.4	0.5	0.7	0.8	0.9	0.7	0.7	0.6	0.6	0.6	0.0
10th Grade	1.3	1.4	1.9	2.4	2.8	3.3	3.3	3.4	3.2	3.1	2.8	-0.4	0.4	0.5	0.7	1.0	1.0	1.0	1.2	1.4	1.2	1.2	1.1	-0.2
12th Grade	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4	4.4	0.0	0.7	0.5	0.8	1.2	1.3	1.6	1.7	1.6	1.6	1.7	1.8	+0.1
PCP[c]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.4	1.4	1.6	1.8	2.6	2.3	2.1	1.8	2.3	1.8	-0.5	0.5	0.6	1.0	0.7	0.6	1.3	0.7	1.0	0.8	0.9	0.5	-0.4
MDMA (Ecstasy)[c,e]																								
8th Grade	—	—	—	—	—	2.3	2.3	1.8	1.7	3.1	3.5	+0.5	—	—	—	—	—	1.0	1.0	0.9	0.8	1.4	1.8	+0.4
10th Grade	—	—	—	—	—	4.6	3.9	3.3	4.4	5.4	6.2	+0.8	—	—	—	—	—	1.8	1.3	1.3	1.8	2.6	2.6	0.0
12th Grade	—	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	+1.0	—	—	—	—	—	2.0	1.6	1.5	2.5	3.6	2.8	-0.9
Cocaine																								
8th Grade	1.1	1.5	1.7	2.1	2.6	3.0	2.8	3.1	2.7	2.6	2.5	-0.1	0.5	0.7	0.7	1.0	1.2	1.3	1.1	1.4	1.3	1.2	1.2	-0.1
10th Grade	2.2	1.9	2.1	2.8	3.5	4.2	4.7	4.7	4.9	4.4	3.6	-0.8	0.7	0.7	0.9	1.2	1.7	1.7	2.0	2.1	1.8	1.8	1.3	-0.4
12th Grade	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	-0.1	1.4	1.3	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.1	2.1	-0.1
Crack																								
8th Grade	0.7	0.9	1.0	1.3	1.6	1.8	1.7	2.1	1.8	1.8	1.7	-0.1	0.3	0.5	0.4	0.7	0.7	0.8	0.7	0.9	0.8	0.8	0.8	0.0
10th Grade	0.9	0.9	1.1	1.4	1.8	2.1	2.2	2.5	2.4	2.2	1.8	-0.4	0.3	0.4	0.5	0.6	0.9	0.8	0.9	1.1	0.8	0.9	0.7	-0.2
12th Grade	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	0.0	0.7	0.6	0.7	0.8	1.0	1.0	0.9	1.0	1.1	1.0	1.1	+0.1

(Table continued on next page)

TABLE 5-5b (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Other Cocaine[f]																								
8th Grade	1.0	1.2	1.3	1.7	2.1	2.5	2.2	2.4	2.3	1.9	1.9	0.0	0.5	0.5	0.6	0.9	1.0	1.0	0.8	1.0	1.1	0.9	0.9	+0.1
10th Grade	2.1	1.7	1.8	2.4	3.0	3.5	4.1	4.0	4.4	3.8	3.0	-0.8s	0.6	0.6	0.7	1.0	1.4	1.3	1.6	1.8	1.6	1.6	1.2	-0.4
12th Grade	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	-0.1	1.2	1.0	1.2	1.3	1.3	1.6	2.0	2.0	2.5	1.7	1.8	+0.1
Heroin[g]																								
8th Grade	0.7	0.7	0.7	1.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	-0.1	0.3	0.4	0.4	0.6	0.6	0.7	0.6	0.6	0.6	0.5	0.6	+0.1
10th Grade	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	-0.4ss	0.2	0.2	0.3	0.4	0.6	0.5	0.6	0.7	0.7	0.5	0.3	-0.2
12th Grade	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	-0.6sss	0.2	0.3	0.2	0.3	0.6	0.5	0.5	0.5	0.5	0.7	0.4	-0.3ss
With a needle[h]																								
8th Grade	—	—	—	—	0.9	1.0	0.8	0.8	0.9	0.6	0.7	+0.1	—	—	—	—	0.4	0.5	0.4	0.5	0.4	0.3	0.4	0.0
10th Grade	—	—	—	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	-0.1	—	—	—	—	0.3	0.3	0.3	0.4	0.3	0.3	0.2	-0.1
12th Grade	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	-0.1	—	—	—	—	0.3	0.4	0.3	0.2	0.2	0.2	0.2	-0.1
Without a needle[h]																								
8th Grade	—	—	—	—	0.8	1.0	0.8	0.8	0.9	0.7	0.6	-0.1	—	—	—	—	0.3	0.4	0.4	0.3	0.4	0.3	0.4	+0.1
10th Grade	—	—	—	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	-0.4ss	—	—	—	—	0.3	0.3	0.4	0.5	0.5	0.4	0.2	-0.2s
12th Grade	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	-0.8sss	—	—	—	—	0.6	0.4	0.6	0.4	0.4	0.7	0.3	-0.3s
Other Narcotics[i]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.5	3.3	3.6	3.8	4.7	5.4	6.2	6.3	6.7	7.0	6.7	-0.2	1.1	1.2	1.3	1.5	1.8	2.0	2.3	2.4	2.6	2.9	3.0	0.0
Amphetamines[i]																								
8th Grade	6.2	6.5	7.2	7.9	8.7	9.1	8.1	7.2	6.9	6.5	6.7	+0.1	2.6	3.3	3.6	3.6	4.2	4.6	3.8	3.3	3.4	3.4	3.2	-0.3
10th Grade	8.2	8.2	9.6	10.2	11.9	12.4	12.1	10.7	10.4	11.1	11.7	+0.6	3.3	3.6	4.3	4.5	5.3	5.5	5.1	5.1	5.0	5.4	5.6	+0.2
12th Grade	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	+0.4	3.2	2.8	3.7	4.0	4.0	4.1	4.8	4.6	4.5	5.0	5.6	+0.6
Methamphetamine[j,k]																								
8th Grade	—	—	—	—	—	—	—	—	3.2	2.5	2.8	+0.2	—	—	—	—	—	—	—	—	1.1	0.8	1.3	+0.4s
10th Grade	—	—	—	—	—	—	—	—	4.6	4.0	3.7	-0.3	—	—	—	—	—	—	—	—	1.8	2.0	1.5	-0.5
12th Grade	—	—	—	—	—	—	—	—	4.7	4.3	3.9	-0.4	—	—	—	—	—	—	—	—	1.7	1.9	1.5	-0.4
Ice[k]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	+0.3	0.6	0.5	0.6	0.7	1.1	1.1	0.8	1.2	0.8	1.0	1.1	+0.1
Barbiturates[i]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	-0.5	1.4	1.1	1.3	1.7	2.2	2.1	2.1	2.6	2.6	3.0	2.8	-0.2
Methaqualone[c,i]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	0.5	0.6	0.2	0.8	0.7	1.1	1.0	1.1	1.1	0.3	0.8	+0.4	0.2	0.4	0.1	0.4	0.4	0.6	0.3	0.6	0.4	0.2	0.5	+0.4
Tranquilizers[i,l]																								
8th Grade	1.8	2.0	2.1	2.4	2.7	3.3	2.9	2.6	2.5	2.6	3.0	+0.4	0.8	0.8	0.9	1.1	1.2	1.5	1.2	1.2	1.1	1.4	1.6	+0.2
10th Grade	3.2	3.5	3.3	3.3	4.0	4.6	4.9	5.1	5.4	5.6	5.9	+0.3	1.2	1.5	1.1	1.5	1.7	1.7	2.2	2.2	2.2	2.5	2.9	+0.3
12th Grade	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7	6.5	+0.8	1.4	1.0	1.2	1.4	1.8	2.0	1.8	2.4	2.5	2.6	3.0	+0.4

(Table continued on next page)

TABLE 5-5b (cont.)
Trends in Annual and 30-Day Prevalence of Use of Various Drugs for Eighth, Tenth, and Twelfth Graders

	Annual												30-Day											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Rohypnol[c,m]																								
8th Grade	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.7	+0.2	—	—	—	—	—	0.5	0.3	0.4	0.3	0.3	0.4	+0.1
10th Grade	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	1.0	+0.2	—	—	—	—	—	0.5	0.5	0.4	0.5	0.4	0.2	-0.2
12th Grade	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9	+0.2	—	—	—	—	—	0.5	0.3	0.3	0.3	0.4	0.3	-0.1
GHB[j,n]																								
8th Grade	—	—	—	—	—	—	—	—	—	1.2	1.1	-0.1	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	1.1	1.0	-0.2	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	1.9	1.6	-0.2	—	—	—	—	—	—	—	—	—	—	—	—
Ketamine[j,n]																								
8th Grade	—	—	—	—	—	—	—	—	—	1.6	1.3	-0.3	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	2.1	2.1	0.0	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	2.5	2.5	0.0	—	—	—	—	—	—	—	—	—	—	—	—
Alcohol[e]																								
Any use																								
8th Grade	54.0	53.7	51.6	—	—	—	—	—	—	—	—	—	25.1	26.1	26.2	—	—	—	—	—	—	—	—	—
			45.4	46.8	45.3	46.5	45.5	43.7	43.5	43.1	41.9	-1.2			24.3	25.5	24.6	26.2	24.5	23.0	24.0	22.4	21.5	-0.9
10th Grade	72.3	70.2	69.3	—	—	—	—	—	—	—	—	—	42.8	39.9	41.5	—	—	—	—	—	—	—	—	—
			63.4	63.9	63.5	65.0	65.2	62.7	63.7	65.3	63.5	-1.8			38.2	39.2	38.8	40.4	40.1	38.8	40.0	41.0	39.0	-2.0
12th Grade	77.7	76.8	76.0	—	—	—	—	—	—	—	—	—	54.0	51.3	51.0	—	—	—	—	—	—	—	—	—
			72.7	73.0	73.7	72.5	74.8	74.3	73.8	73.2	73.3	+0.1			48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	-0.3
Been Drunk[k]																								
8th Grade	17.5	18.3	18.2	18.2	18.4	19.8	18.4	17.9	18.5	18.5	16.6	-1.9s	7.6	7.5	7.8	8.7	8.3	9.6	8.2	8.4	9.4	8.3	7.7	-0.7
10th Grade	40.1	37.0	37.8	38.0	38.5	40.1	40.7	38.3	40.9	41.6	39.9	-1.7	20.5	18.1	19.8	20.3	20.8	21.3	22.4	21.1	22.5	23.5	21.9	-1.6
12th Grade	52.7	50.3	49.6	51.7	52.5	51.9	53.2	52.0	53.2	51.8	53.2	+1.4	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	+0.4
Cigarettes																								
Any use																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	14.3	15.5	16.7	18.6	19.1	21.0	19.4	19.1	17.5	14.6	12.2	-2.5sss
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	20.8	21.5	24.7	25.4	27.9	30.4	29.8	27.6	25.7	23.9	21.3	-2.6ss
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	-2.0
Bidis[j,k]																								
8th Grade	—	—	—	—	—	—	—	—	—	3.9	2.7	-1.3s	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	6.4	4.9	-1.5s	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	9.2	7.0	-2.2s	—	—	—	—	—	—	—	—	—	—	—	—
Kreteks[j,k]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	2.6	—	—	—	—	—	—	—	—	—	—	—	—	—
10th Grade	—	—	—	—	—	—	—	—	—	—	6.0	—	—	—	—	—	—	—	—	—	—	—	—	—
12th Grade	—	—	—	—	—	—	—	—	—	—	10.1	—	—	—	—	—	—	—	—	—	—	—	—	—
Smokeless Tobacco[c,p]																								
8th Grade	—	—	—	—	—	—	—	—	—	—	—	—	6.9	7.0	6.6	7.7	7.1	7.1	5.5	4.8	4.5	4.2	4.0	-0.2
10th Grade	—	—	—	—	—	—	—	—	—	—	—	—	10.0	9.6	10.4	10.5	9.7	8.6	8.9	7.5	6.5	6.1	6.9	+0.8
12th Grade	—	—	—	—	—	—	—	—	—	—	—	—	—	11.4	10.7	11.1	12.2	9.8	9.7	8.8	8.4	7.6	7.8	+0.2
Steroids[k]																								
8th Grade	1.0	1.1	0.9	1.2	1.0	0.9	1.0	1.2	1.7	1.7	1.6	0.0	0.4	0.5	0.5	0.5	0.6	0.4	0.5	0.5	0.7	0.8	0.7	-0.1
10th Grade	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.7	2.2	2.1	-0.1	0.6	0.6	0.5	0.6	0.6	0.5	0.7	0.6	0.9	1.0	0.9	0.0
12th Grade	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	+0.7s	0.8	0.6	0.7	0.9	0.7	0.7	1.0	1.1	0.9	0.8	1.3	+0.5s

TABLE 5-5c

Trends in 30-Day Prevalence of Daily Use of Various Drugs for Eighth, Tenth, and Twelfth Graders

	Daily											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Marijuana/Hashish, daily[c]												
8th Grade	0.2	0.2	0.4	0.7	0.8	1.5	1.1	1.1	1.4	1.3	1.3	0.0
10th Grade	0.8	0.8	1.0	2.2	2.8	3.5	3.7	3.6	3.8	3.8	4.5	+0.7s
12th Grade	2.0	1.9	2.4	3.6	4.6	4.9	5.8	5.6	6.0	6.0	5.8	-0.2
Alcohol[c,d]												
Any daily use												
8th Grade	0.5	0.6	0.8	—	—	—	—	—	—	—	—	—
			1.0	1.0	0.7	1.0	0.8	0.9	1.0	0.8	0.9	+0.1
10th Grade	1.3	1.2	1.6	—	—	—	—	—	—	—	—	—
			1.8	1.7	1.7	1.6	1.7	1.9	1.9	1.8	1.9	+0.1
12th Grade	3.6	3.4	2.5	—	—	—	—	—	—	—	—	—
			3.4	2.9	3.5	3.7	3.9	3.9	3.4	2.9	3.6	+0.7ss
Been Drunk, daily[b,c]												
8th Grade	0.1	0.1	0.2	0.3	0.2	0.2	0.2	0.3	0.4	0.3	0.2	0.0
10th Grade	0.2	0.3	0.4	0.4	0.6	0.4	0.6	0.6	0.7	0.5	0.6	+0.1
12th Grade	0.9	0.8	0.9	1.2	1.3	1.6	2.0	1.5	1.9	1.7	1.4	-0.3
5+ drinks in last 2 weeks												
8th Grade	12.9	13.4	13.5	14.5	14.5	15.6	14.5	13.7	15.2	14.1	13.2	-0.9
10th Grade	22.9	21.1	23.0	23.6	24.0	24.8	25.1	24.3	25.6	26.2	24.9	-1.3
12th Grade	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	-0.3
Cigarettes												
Any use												
8th Grade	7.2	7.0	8.3	8.8	9.3	10.4	9.0	8.8	8.1	7.4	5.5	-1.9sss
10th Grade	12.6	12.3	14.2	14.6	16.3	18.3	18.0	15.8	15.9	14.0	12.2	-1.8s
12th Grade	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	-1.6
1/2 pack+/day												
8th Grade	3.1	2.9	3.5	3.6	3.4	4.3	3.5	3.6	3.3	2.8	2.3	-0.4
10th Grade	6.5	6.0	7.0	7.6	8.3	9.4	8.6	7.9	7.6	6.2	5.5	-0.6
12th Grade	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	-1.0
Smokeless Tobacco, daily[c,g]												
8th Grade	1.6	1.8	1.5	1.9	1.2	1.5	1.0	1.0	0.9	0.9	1.2	+0.3
10th Grade	3.3	3.0	3.3	3.0	2.7	2.2	2.2	2.2	1.5	1.9	2.2	+0.4
12th Grade	—	4.3	3.3	3.9	3.6	3.3	4.4	3.2	2.9	3.2	2.8	-0.4

TABLE 5-6

Trends in Prevalence of Use of Heroin *with* and *without* a Needle Eighth, Tenth, and Twelfth Graders

(Entries are percentages of all respondents)

Percentage who used in:

	Lifetime								Past year								Past month							
	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Eighth Graders																								
Used heroin:																								
Only without a needle	0.7	0.9	0.8	0.9	0.7	0.8	0.6	-0.2	0.5	0.5	0.5	0.5	0.5	0.5	0.3	-0.2s	0.2	0.2	0.2	0.2	0.2	0.2	0.2	+0.1
Only with a needle	0.7	0.8	0.7	0.8	0.9	0.6	0.6	0.0	0.5	0.6	0.4	0.5	0.5	0.4	0.4	0.0	0.3	0.3	0.2	0.3	0.3	0.2	0.2	0.0
Both ways	0.8	0.7	0.6	0.6	0.7	0.5	0.5	+0.1	0.4	0.4	0.3	0.4	0.4	0.2	0.3	+0.1	0.2	0.2	0.2	0.2	0.2	0.1	0.1	0.0
Used heroin at all	2.3	2.4	2.1	2.3	2.3	1.9	1.7	-0.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	-0.1	0.6	0.7	0.6	0.6	0.6	0.5	0.6	+0.1
Approx. weighted N =	*8,800*	*17,800*	*18,600*	*18,100*	*16,700*	*16,700*	*16,200*		*8,800*	*17,800*	*18,600*	*18,100*	*16,700*	*16,700*	*16,200*		*8,800*	*17,800*	*18,600*	*18,100*	*16,700*	*16,700*	*16,200*	
Tenth Graders																								
Used heroin:																								
Only without a needle	0.7	1.1	1.0	1.2	1.1	1.2	0.8	-0.3s	0.5	0.6	0.7	0.6	0.8	0.8	0.5	-0.3ss	0.2	0.2	0.3	0.3	0.4	0.2	0.1	-0.1s
Only with a needle	0.6	0.5	0.4	0.6	0.7	0.5	0.4	-0.2	0.3	0.3	0.3	0.4	0.3	0.3	0.3	0.0	0.2	0.2	0.1	0.2	0.1	0.1	0.1	0.0
Both ways	0.4	0.6	0.6	0.6	0.6	0.5	0.4	-0.1	0.3	0.3	0.4	0.4	0.3	0.2	0.2	0.0	0.1	0.1	0.2	0.2	0.2	0.1	0.1	0.0
Used heroin at all	1.7	2.1	2.1	2.3	2.3	2.2	1.7	-0.6s	1.1	1.2	1.4	1.4	1.4	1.4	0.9	-0.4ss	0.6	0.5	0.6	0.7	0.7	0.5	0.3	-0.2
Approx. weighted N =	*8,500*	*15,600*	*15,500*	*15,000*	*13,600*	*14,300*	*14,000*		*8,500*	*15,600*	*15,500*	*15,000*	*13,600*	*14,300*	*14,000*		*8,500*	*15,600*	*15,500*	*15,000*	*13,600*	*14,300*	*14,000*	
Twelfth Graders																								
Used heroin:																								
Only without a needle	0.9	1.1	1.3	1.2	1.2	1.8	1.2	-0.6s	0.6	0.6	0.7	0.6	0.8	1.1	0.6	-0.5ss	0.3	0.1	0.3	0.3	0.3	0.5	0.2	-0.3s
Only with a needle	0.3	0.3	0.3	0.4	0.4	0.3	0.3	0.0	0.2	0.2	0.2	0.2	0.2	0.2	0.1	-0.1	0.1	0.2	0.1	0.1	0.1	0.2	0.1	-0.1
Both ways	0.4	0.4	0.5	0.5	0.4	0.4	0.4	0.0	0.3	0.3	0.3	0.2	0.2	0.2	0.2	0.0	0.1	0.2	0.2	0.1	0.1	0.1	0.1	+0.1
Used heroin at all	1.6	1.8	2.1	2.0	2.0	2.4	1.8	-0.6s	1.1	1.0	1.2	1.0	1.1	1.5	0.9	-0.6sss	0.6	0.5	0.5	0.5	0.5	0.7	0.4	-0.3ss
Approx. weighted N =	*7,700*	*7,200*	*7,700*	*7,600*	*6,800*	*6,400*	*6,400*		*7,700*	*7,200*	*7,700*	*7,600*	*6,800*	*6,400*	*6,400*		*7,700*	*7,200*	*7,700*	*7,600*	*6,800*	*6,400*	*6,400*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the total who used heroin at all and the sum of those who used without a needle, with a needle, and both ways is due to rounding error.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
Eighth- and tenth-grade data based on one of two forms in 1995 and on all forms after 1995; twelfth-grade data based on three of six forms.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 5-7a
Trends in Noncontinuation Rates among Twelfth Graders Who Ever Used Drug in Lifetime

Percentage who did not use in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
Marijuana/Hashish	15.4	15.7	15.6	15.2	15.9	19.1	22.5	24.5	25.8	27.1	25.1	23.8	27.7	29.9	32.3	33.7	34.9	32.8	26.3	19.6	16.8	20.3	22.4	23.6	23.9	25.2	24.5
Inhalants	—	70.9	66.7	65.8	57.5	61.3	66.7	64.8	68.4	64.6	63.0	61.6	59.4	61.1	66.5	61.7	62.5	62.7	59.8	56.5	54.0	54.2	58.4	59.2	63.6	58.5	65.4
Inhalants, Adjusted	—	—	—	—	50.8	55.7	65.5	63.3	64.4	58.4	59.8	55.7	56.5	59.4	62.9	59.5	61.7	62.4	58.2	55.2	52.8	51.4	56.8	57.0	62.5	57.5	64.5
Amyl/Butyl Nitrites	—	—	—	—	41.4	48.6	63.4	63.3	57.1	50.6	49.4	45.3	44.7	46.9	48.5	33.3	43.7	66.7	35.7	35.3	26.7	11.1	40.0	48.1	47.1	25.0	68.4
Hallucinogens	31.3	37.7	36.7	32.9	29.8	30.1	32.3	35.2	38.7	39.3	38.8	38.1	37.9	38.2	40.4	37.2	39.6	35.9	32.1	33.3	26.8	27.9	35.1	36.2	31.4	37.7	34.4
Hallucinogens, Adj.	—	—	—	—	31.2	32.5	35.7	38.0	36.7	40.6	36.9	36.1	36.8	37.0	37.4	38.1	39.0	34.0	31.0	33.3	26.0	26.2	35.1	36.1	31.0	36.0	32.8
LSD	36.3	41.8	43.9	35.1	30.5	30.1	33.7	36.5	39.3	41.3	41.3	37.5	38.1	37.7	41.0	37.9	40.9	34.9	34.0	34.3	28.2	30.2	38.2	39.7	33.6	40.5	39.4
Hallucinogens Other Than LSD	33.3	42.1	38.4	37.1	36.4	36.7	38.5	41.3	43.8	42.4	44.6	47.4	40.7	48.8	48.8	48.8	45.9	48.5	43.6	36.7	29.6	35.3	38.7	35.2	35.8	36.2	37.1
PCP	—	—	—	—	45.3	54.2	59.0	63.3	53.6	54.0	40.8	50.0	56.7	58.6	38.5	57.1	51.7	41.7	51.7	42.9	33.3	35.0	41.0	46.2	47.1	32.4	48.6
MDMA (Ecstasy)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.6	42.0	37.9	30.0	25.5	21.4
Cocaine	37.8	38.1	33.3	30.2	22.1	21.7	24.8	28.1	29.6	28.0	24.3	24.9	32.2	34.7	36.9	43.6	55.1	49.2	45.9	39.0	33.3	31.0	36.8	38.7	36.7	41.9	41.5
Crack	—	—	—	—	—	—	—	—	—	—	—	—	27.8	35.4	34.0	45.7	51.6	42.3	42.3	36.7	30.0	36.4	38.5	43.2	41.3	43.6	43.2
Other Cocaine	—	—	—	—	—	—	—	—	—	—	—	—	30.0	38.8	38.8	46.5	54.3	50.9	46.3	42.3	33.3	34.4	39.0	41.7	34.1	41.6	40.5
Heroin	54.5	55.6	55.6	50.0	54.5	54.5	54.5	50.0	50.0	61.5	50.0	54.5	58.3	54.5	53.8	61.5	55.6	50.0	54.5	50.0	31.3	44.4	42.9	50.0	45.0	37.5	50.0
With a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.6	37.5	44.4	50.0	55.6	50.0	57.1
Without a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.6	41.2	42.9	50.0	44.4	33.3	46.7
Other Narcotics	36.7	40.6	37.9	39.4	38.6	35.7	41.6	44.8	45.7	46.4	42.2	42.2	42.4	46.5	47.0	45.8	47.0	45.9	43.8	42.4	34.7	34.2	36.1	35.7	34.3	34.0	32.3
Amphetamines	27.4	30.1	29.1	25.3	24.4	21.2	19.3	27.2	33.5	36.6	39.7	42.7	43.5	44.9	43.5	48.0	46.8	48.9	44.4	40.1	39.2	37.9	38.2	38.4	37.4	32.7	32.7
Methamphetamine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	42.7	45.6	43.5
Crystal Meth. (Ice)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	51.9	57.6	55.2	45.2	47.1	38.5	36.4	47.7	43.4	60.4	45.0	39.0
Sedatives	35.7	39.5	37.9	38.1	32.2	30.9	34.4	40.1	45.1	50.4	50.8	50.0	52.9	52.6	50.0	—	—	—	—	—	—	—	—	—	—	—	—
Barbiturates	36.7	40.7	40.4	40.9	36.4	38.2	41.6	46.6	47.5	50.5	50.0	50.0	51.4	52.2	49.2	50.0	45.2	49.1	46.0	41.4	36.5	35.5	37.0	36.8	34.8	32.6	34.5
Methaqualone	37.0	39.7	38.8	38.0	28.9	24.2	28.3	36.4	46.5	54.2	58.2	59.6	62.5	60.6	51.9	69.6	61.5	62.5	75.0	42.9	41.7	45.0	41.2	31.3	38.9	62.5	27.3
Tranquilizers	37.6	38.7	40.0	41.8	41.1	42.8	45.6	50.0	48.1	50.8	48.7	46.8	49.5	48.9	50.0	51.4	50.0	53.3	45.3	43.9	38.0	36.1	39.7	35.3	37.6	36.0	29.3
Rohypnol	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	8.3	33.3	53.3	50.0	46.7	47.1
Alcohol[a]	6.2	6.7	5.9	5.8	5.3	5.7	6.0	6.5	5.7	7.1	7.2	7.4	7.0	7.3	8.8	9.9	11.7	12.2	12.6	—	—	—	—	—	—	—	—
	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.1	9.2	8.7	8.5	8.4	8.7	7.8	8.8	8.0
Been Drunk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	19.4	20.7	20.6	17.8	16.9	16.0	17.1	16.7	14.6	16.9	16.7
Cigarettes[b]	16.0	16.7	16.2	17.9	19.6	21.4	20.8	19.1	18.6	18.5	15.9	17.0	17.1	18.2	18.5	18.2	17.4	18.6	16.9	15.9	14.6	13.5	13.1	14.3	16.1	16.3	17.5
Smokeless Tobacco[b]	—	—	—	—	—	—	—	—	—	—	—	21.8	18.4	25.7	26.2	—	—	29.6	25.5	33.1	26.5	27.3	26.2	17.9	20.7	15.1	18.9
Steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.7	41.4	33.3	47.6	40.0	45.8	34.8	26.3	41.7	37.0	37.9	32.0	35.1

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 1993, the question text was changed slightly in three forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from forms using the original wording, while the data in the lower line came from forms using the revised wording. In 1993, each line of data was based on three of six questionnaire forms. Beginning in 1994, data were based on all six questionnaire forms.

[b] Percentage of regular users (ever) who did not use at all in the last thirty days.

TABLE 5-7b
Trends in Noncontinuation Rates among Twelfth Graders Who Used Drug Ten or More Times in Lifetime

	Percentage who did not use in last twelve months																										
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
Marijuana/Hashish	4.0	4.0	4.1	3.7	4.6	5.4	7.2	7.6	8.3	8.8	7.8	7.9	9.2	9.9	10.6	12.3	10.5	10.9	7.8	5.0	4.7	6.6	7.7	8.2	8.5	9.0	8.7
Inhalants	—	48.9	42.6	34.6	23.8	25.2	23.8	27.2	23.1	23.4	25.8	15.3	21.1	21.5	25.9	24.0	23.7	28.6	21.8	26.4	21.6	24.8	25.2	28.0	27.8	23.0	30.8
Nitrites	—	—	—	—	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
Hallucinogens	10.8	16.1	15.2	10.8	8.1	8.4	7.7	7.5	13.0	14.1	12.2	11.1	11.9	16.6	21.8	16.5	17.4	11.5	12.1	14.3	10.6	9.0	12.2	16.4	12.8	12.9	12.3
LSD	15.2	17.3	18.0	12.2	7.4	6.4	7.1	7.5	15.3	12.1	12.6	12.2	11.5	16.0	21.2	16.0	18.5	11.4	11.9	15.3	11.5	10.5	16.8	20.3	14.3	15.7	14.6
Hallucinogens Other Than LSD	—	16.6	14.4	13.3	11.5	13.1	7.7	8.2	8.5	14.5	13.7	16.0	15.8	20.1	19.5	22.6	29.3	19.6	16.2	16.0	10.1	15.5	15.9	17.5	13.4	6.2	10.8
PCP	—	—	—	—	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
MDMA (Ecstasy)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†	†	2.5
Cocaine	7.7	8.2	6.2	3.8	3.1	3.1	3.1	2.9	6.2	3.1	2.5	3.5	7.6	11.4	11.3	19.6	25.3	20.2	14.1	22.9	9.6	8.8	12.0	12.4	12.3	18.1	15.6
Crack[a]	—	—	—	—	—	—	—	—	—	—	—	—	13.4	2.1	5.2	26.2	31.1	15.3	16.4	16.8	6.3	8.3	17.4	19.5	16.0	13.5	7.1
Other Cocaine	—	—	—	—	—	—	—	—	—	—	—	—	10.2	6.1	16.2	18.5	24.3	23.2	14.7	24.1	15.5	13.9	14.6	17.1	13.1	22.5	14.9
Heroin	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†
With a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†	†	†	†
Without a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†	†	†	†
Other Narcotics	9.6	11.6	9.7	9.9	8.7	10.8	10.1	13.5	16.4	15.4	12.2	13.8	15.6	19.3	15.2	15.9	16.1	16.8	16.7	16.8	12.6	11.5	10.1	12.4	12.2	10.8	9.7
Amphetamines	8.0	9.8	7.6	7.4	6.1	4.1	4.4	8.4	10.7	12.7	17.5	17.6	17.5	16.0	17.4	18.1	17.2	19.8	13.5	13.8	11.9	10.2	10.8	15.0	12.7	11.2	7.7
Methamphetamine	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	22.8	19.2
Crystal Meth. (Ice)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†	†	†	†	†	†	†	†	†
Sedatives[b]	13.6	16.2	12.4	12.8	8.6	10.5	7.6	8.6	16.4	20.8	23.6	19.7	23.1	25.2	17.3	—	—	—	—	—	—	—	—	—	—	—	—
Barbiturates	13.4	16.5	12.9	13.5	11.2	11.7	8.9	12.6	17.7	22.8	20.6	19.7	20.7	23.4	18.0	19.8	19.7	23.4	11.0	14.9	10.9	8.3	11.1	12.5	10.7	7.0	5.6
Methaqualone[b]	13.5	15.9	11.9	13.1	6.1	6.0	4.9	8.0	16.3	23.3	26.7	24.9	32.2	29.8	18.6	—	—	—	—	—	—	—	—	—	—	—	—
Tranquilizers	12.0	13.0	11.1	14.4	14.1	14.3	16.3	16.0	14.8	18.8	19.2	15.0	17.1	15.8	11.7	19.3	13.1	21.0	6.7	13.8	6.2	6.9	13.9	13.6	9.9	5.3	8.1
Rohypnol	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	†	†	†	†	†	†
Alcohol[c]	0.6	0.8	0.6	0.9	0.7	0.8	1.0	0.9	0.9	1.1	1.2	1.0	1.1	1.2	1.5	1.9	1.9	2.3	2.3	—	—	—	—	—	—	—	—
																			2.5	2.1	2.0	1.6	1.9	1.9	1.7	1.7	1.3
Been Drunk	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.3	4.1	4.6	3.3	2.8	2.1	3.6	2.8	1.8	2.6	2.3
Steroids[a]	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†	†

NOTES: '—' indicates data not available. '†' indicates that the cell entries in these rows were omitted because they were based on fewer than 50 seniors who used ten or more times. All other cells contain more than 50 cases.

SOURCE: The Monitoring the Future Study, the University of Michigan.

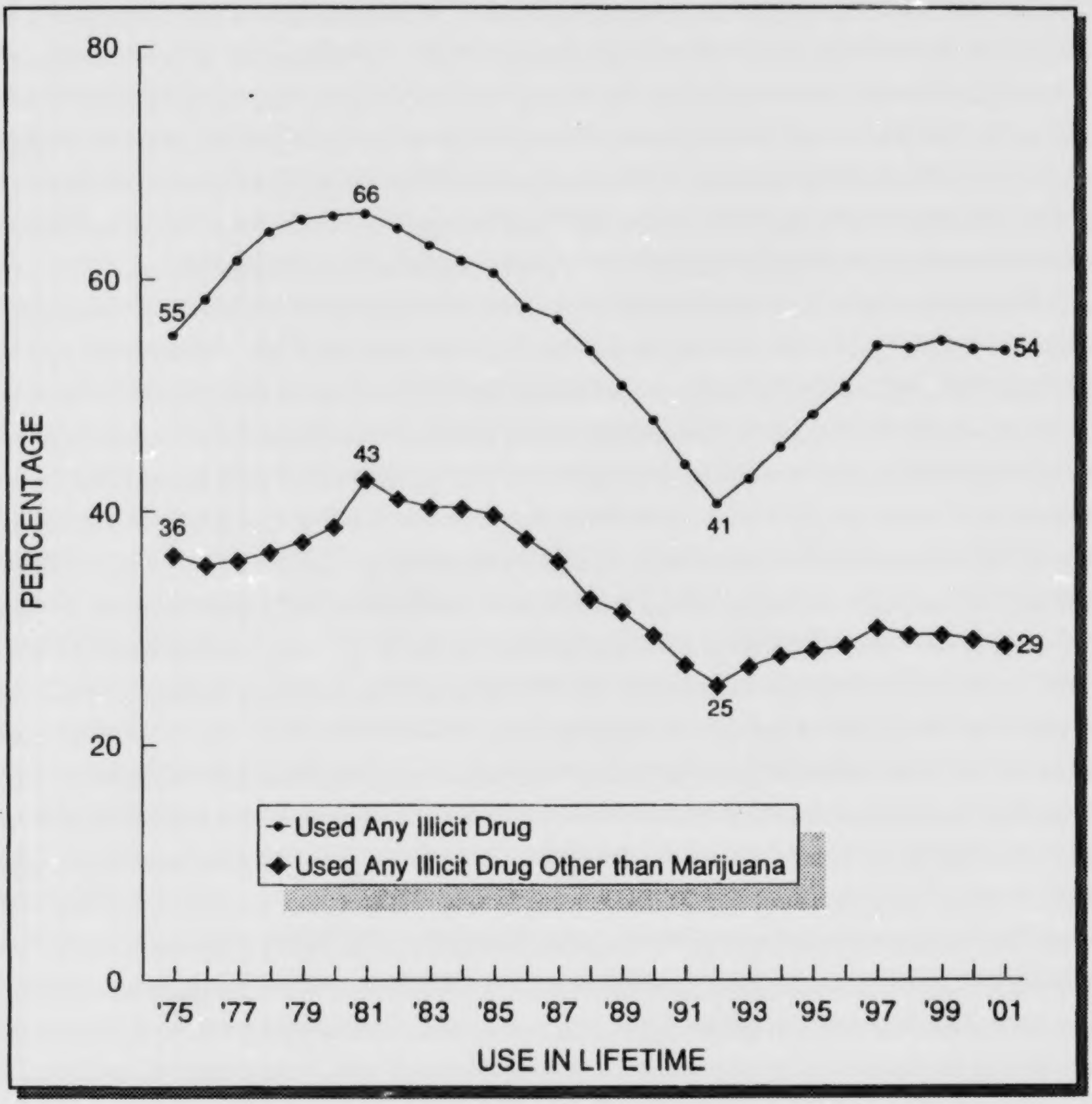
[a] Based on 85 cases in 1987, 54 cases in 1988, and 56 cases in 1989. Crack was included in all six questionnaire forms beginning in 1990.

[b] Based on too few cases beginning in 1990, because this question was asked in only one of the six questionnaire forms.

[c] In 1993, the question text was changed slightly in three forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for alcohol came from forms using the original wording, while the data in the lower line came from forms using the revised wording. In 1993, each line of data was based on three of six questionnaire forms. Beginning in 1994, data were based on all six questionnaire forms.

FIGURE 5-1

Trends in Lifetime Prevalence of an Illicit Drug Use Index for Twelfth Graders

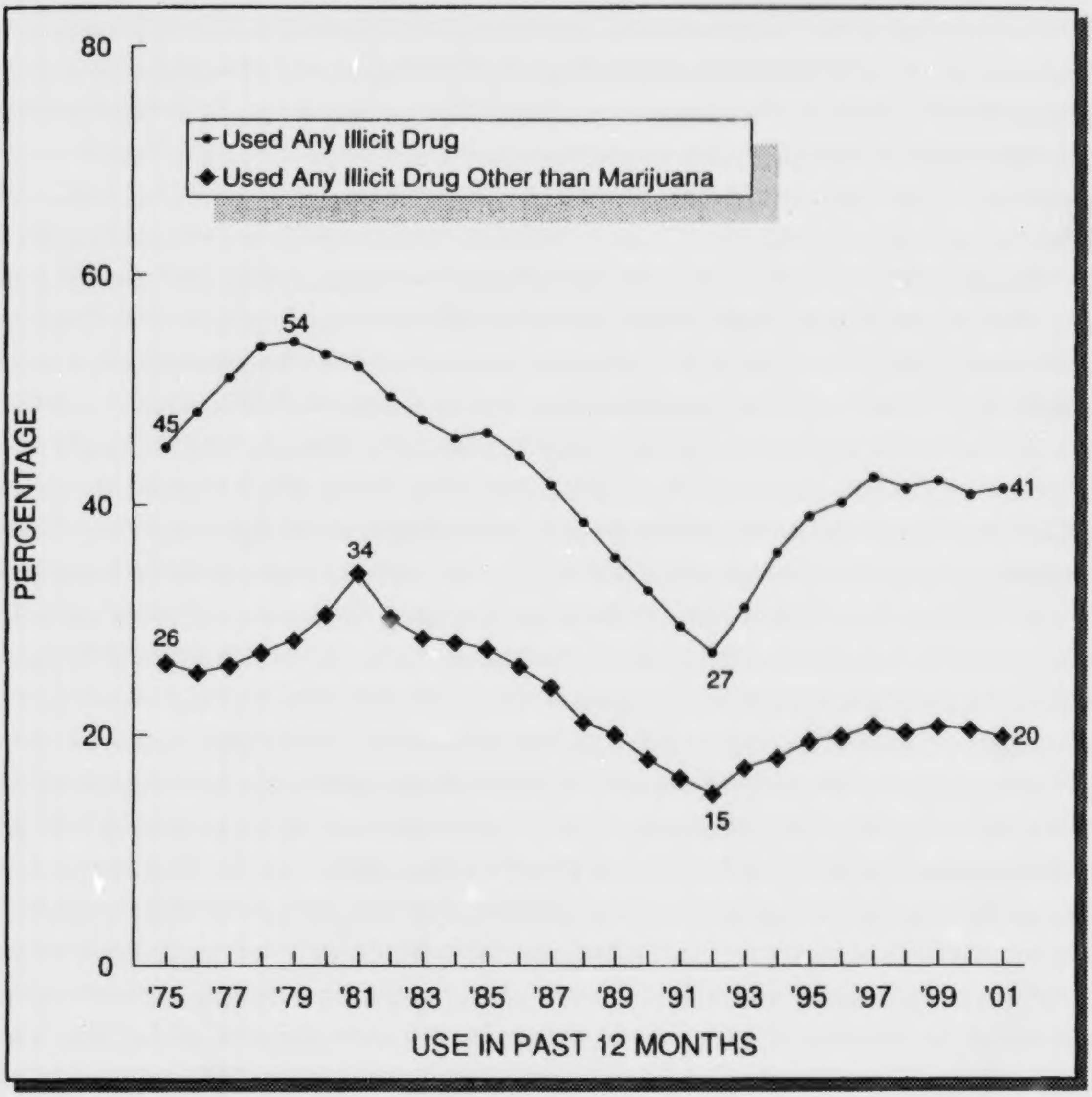


NOTES: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use which is not under a doctor's orders of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers.

Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

FIGURE 5-2

Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders

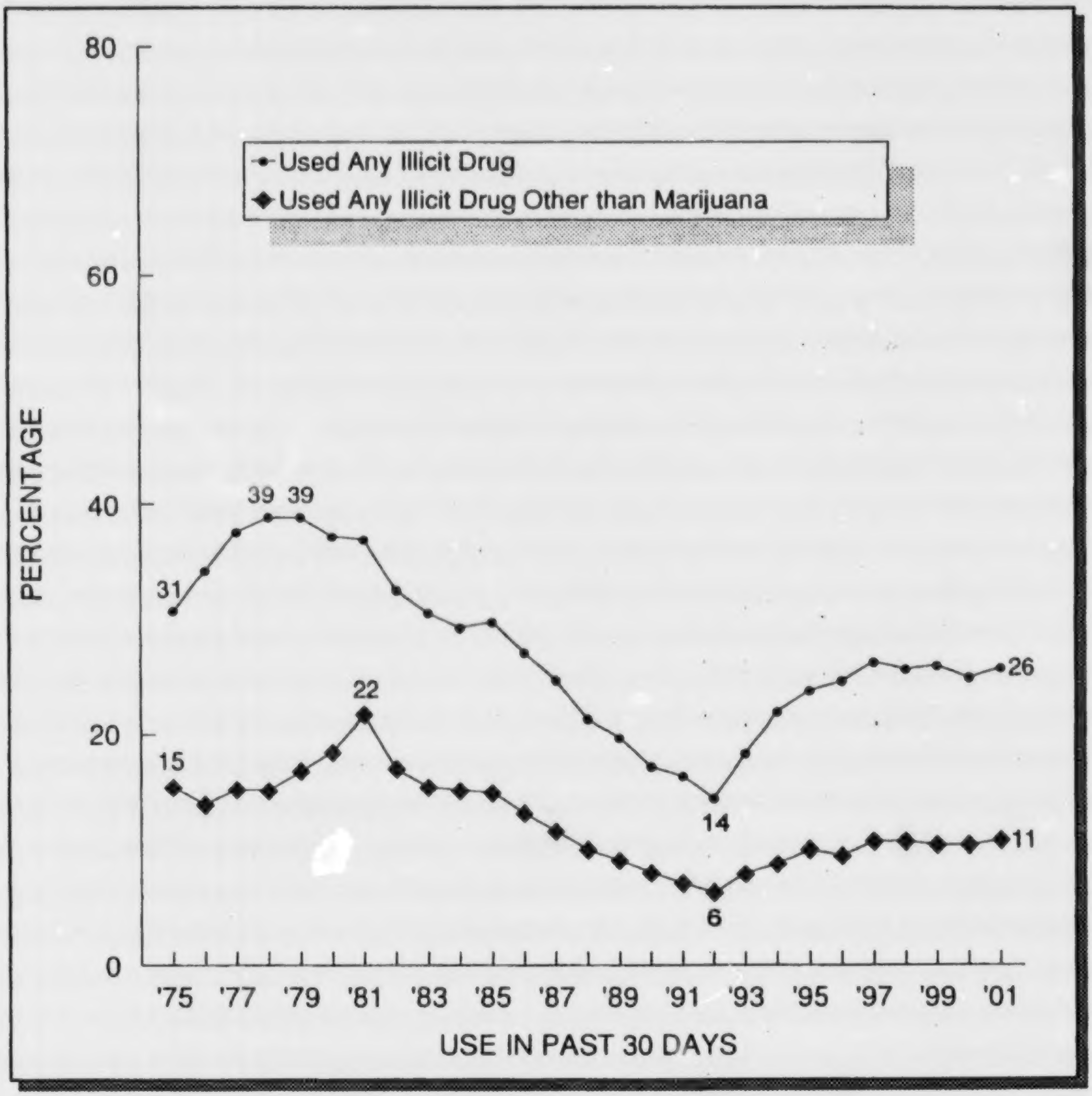


NOTES: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack or other cocaine, or heroin, or any use which is not under a doctor's orders of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers.

Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

FIGURE 5-3

Trends in Thirty-Day Prevalence of an Illicit Drug Use Index for Twelfth Graders

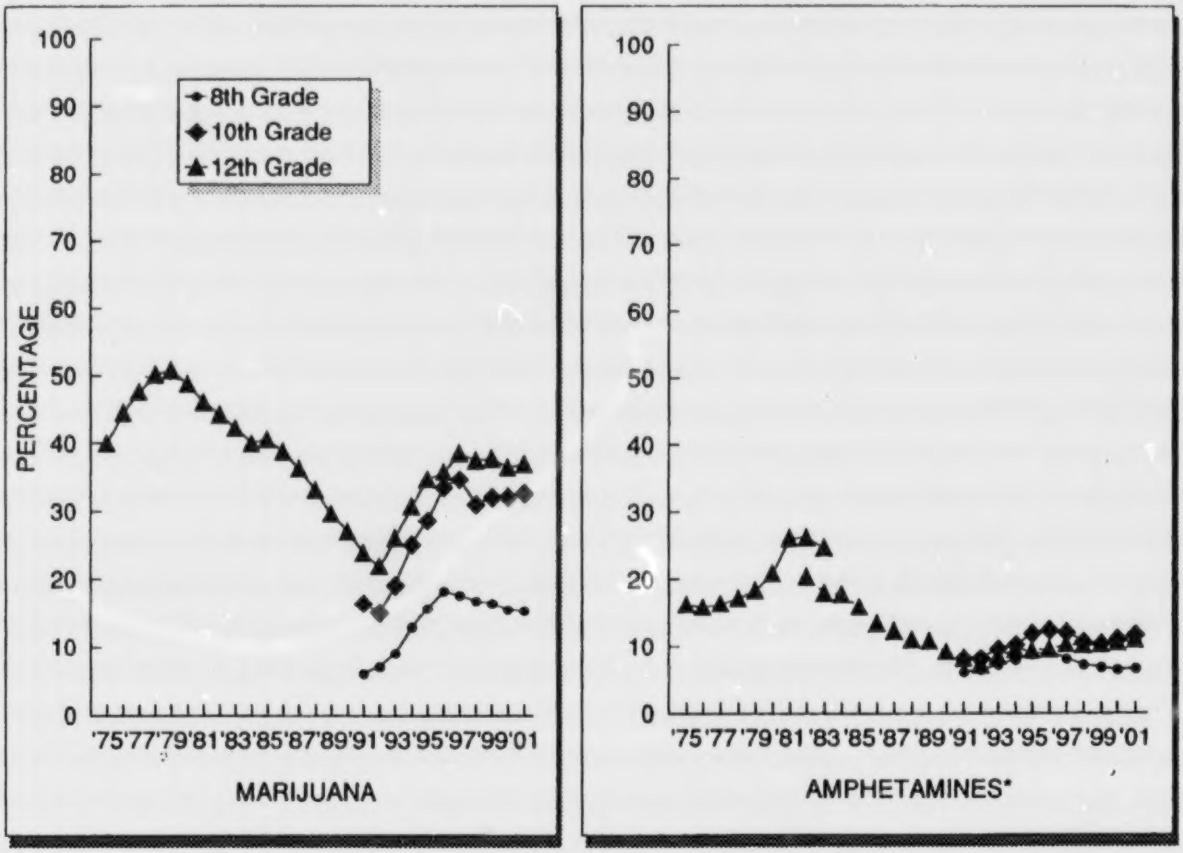


NOTES: Use of "any illicit drugs" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use which is not under a doctor's orders of other opiates, stimulants, barbiturates, methaqualone (excluded since 1990), or tranquilizers.

Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

FIGURE 5-4a

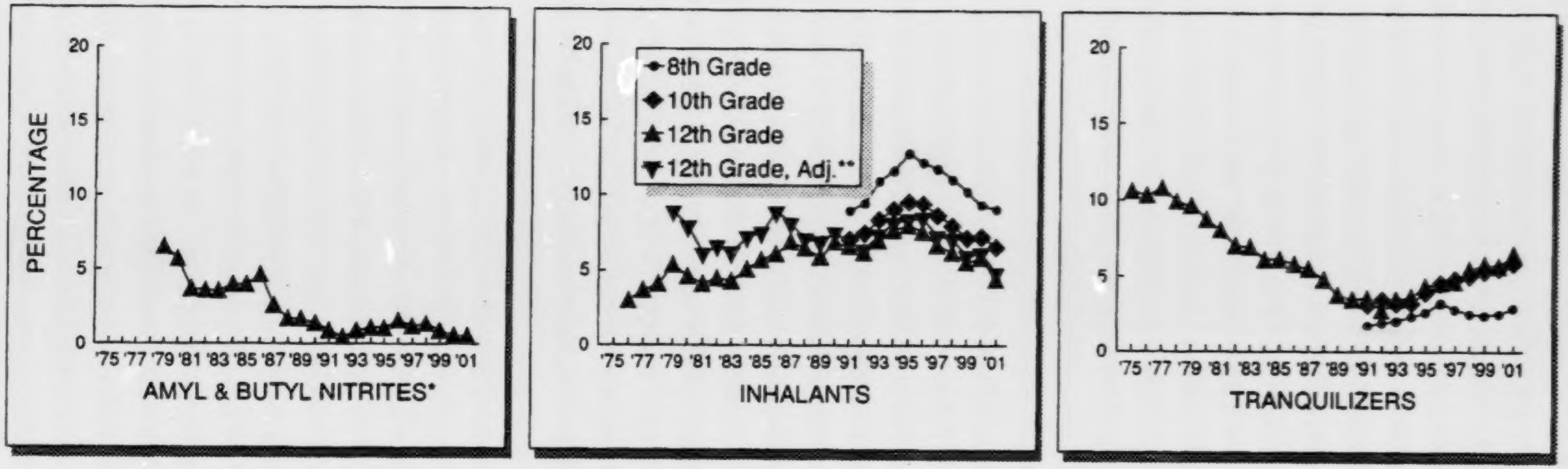
Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



*The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 5-4b

Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders

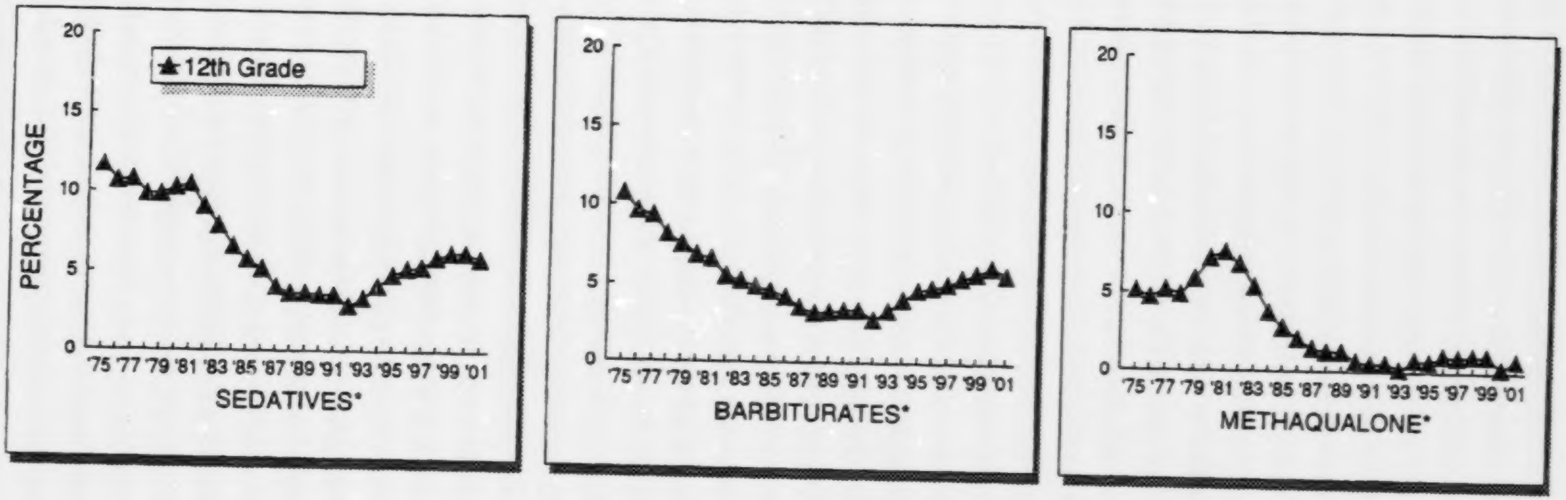


*8th and 10th graders are not asked about nitrite use.

**Adjusted for underreporting of amyl and butyl nitrites.

FIGURE 5-4c

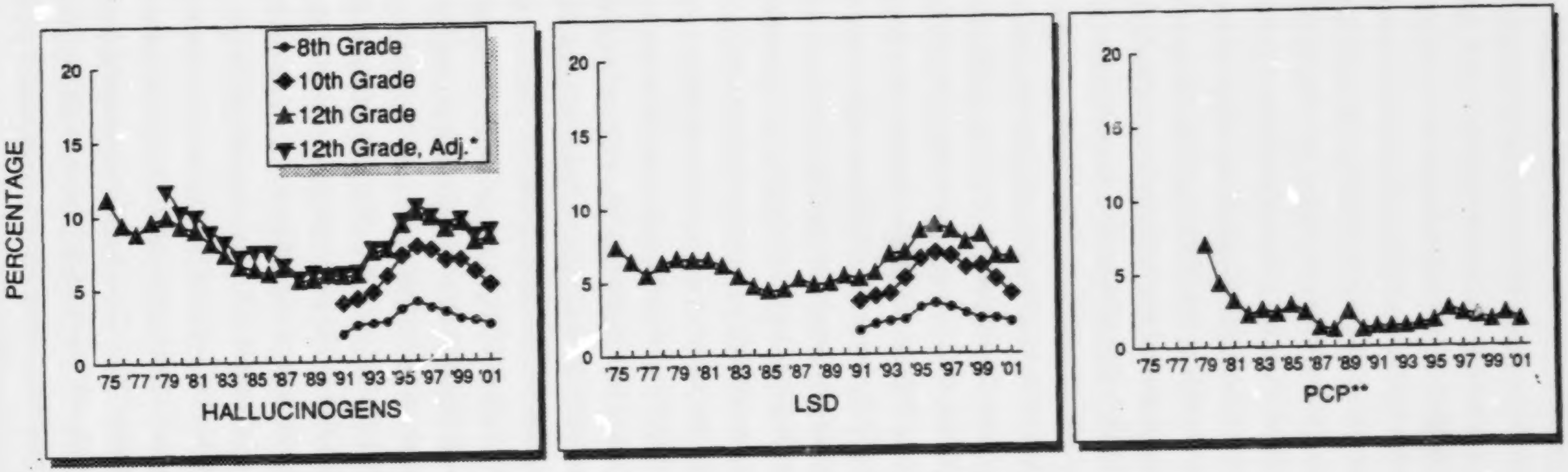
Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



*8th and 10th graders are not asked about sedative, barbiturate, and methaqualone use.

FIGURE 5-4d

Trends in Annual Prevalence of Various Drugs
for Eighth, Tenth, and Twelfth Graders



*Adjusted for underreporting of PCP.

**8th and 10th graders are not asked about PCP use.

FIGURE 5-4e

Trends in Annual Prevalence of Various Drugs
for Eighth, Tenth, and Twelfth Graders

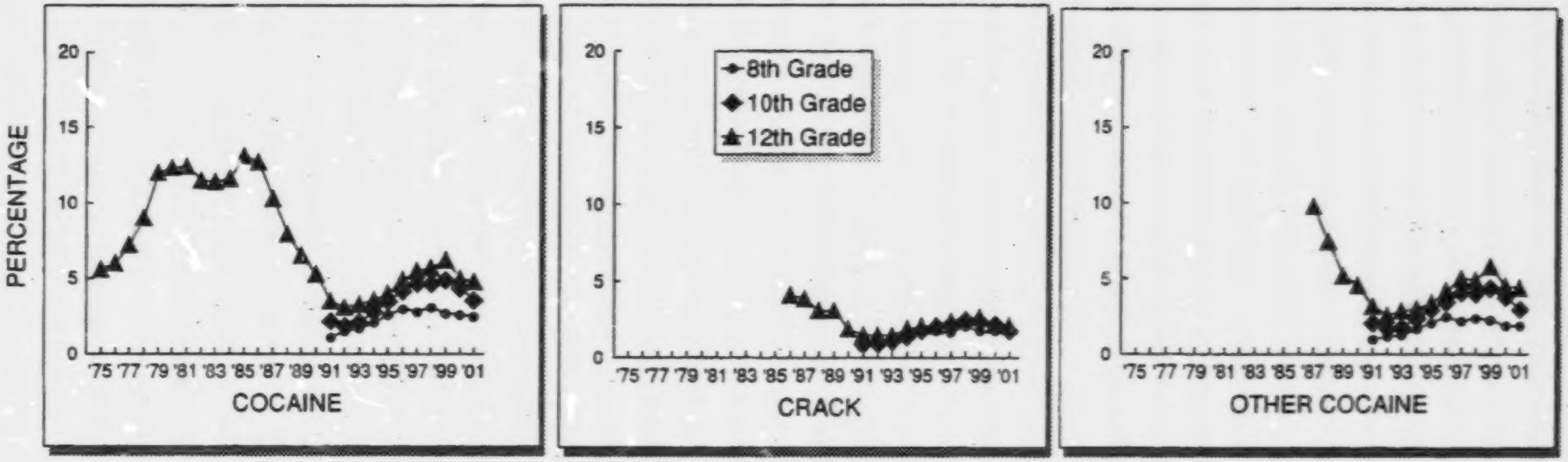


FIGURE 5-4f

Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders

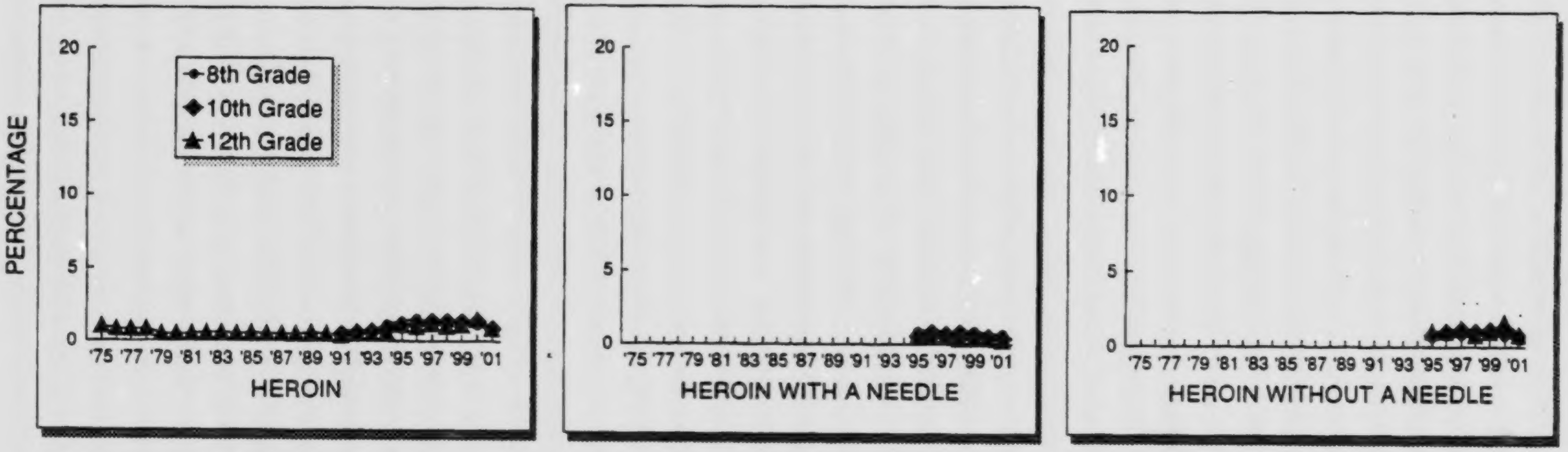
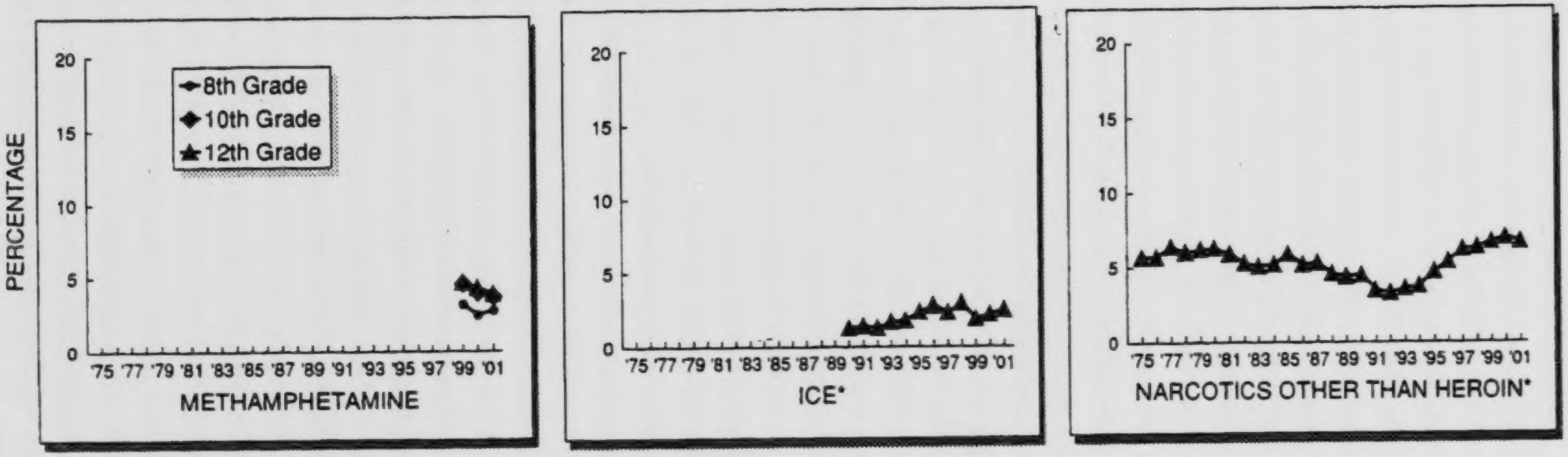


FIGURE 5-4g

Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



*8th and 10th graders are not asked about narcotics other than heroin or ice use.

FIGURE 5-4h

Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders

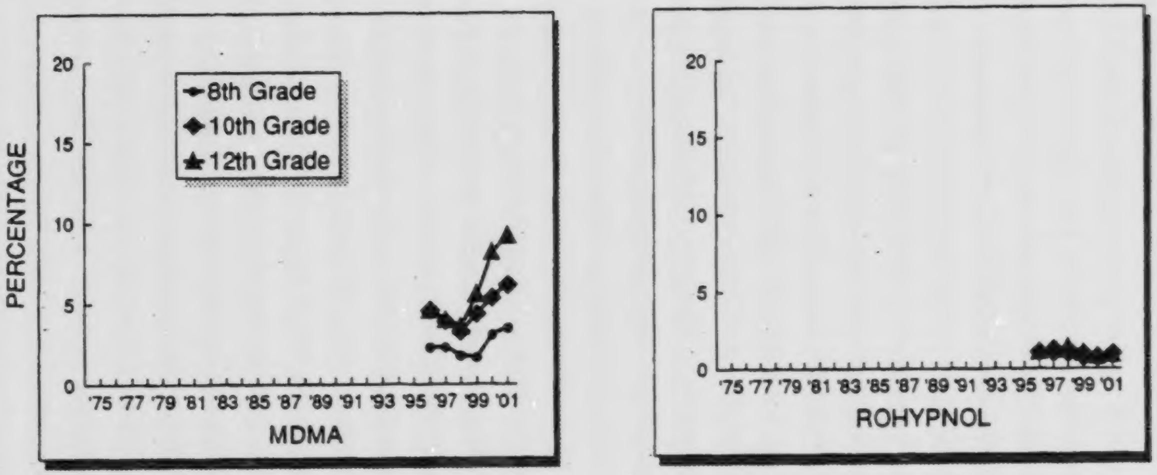
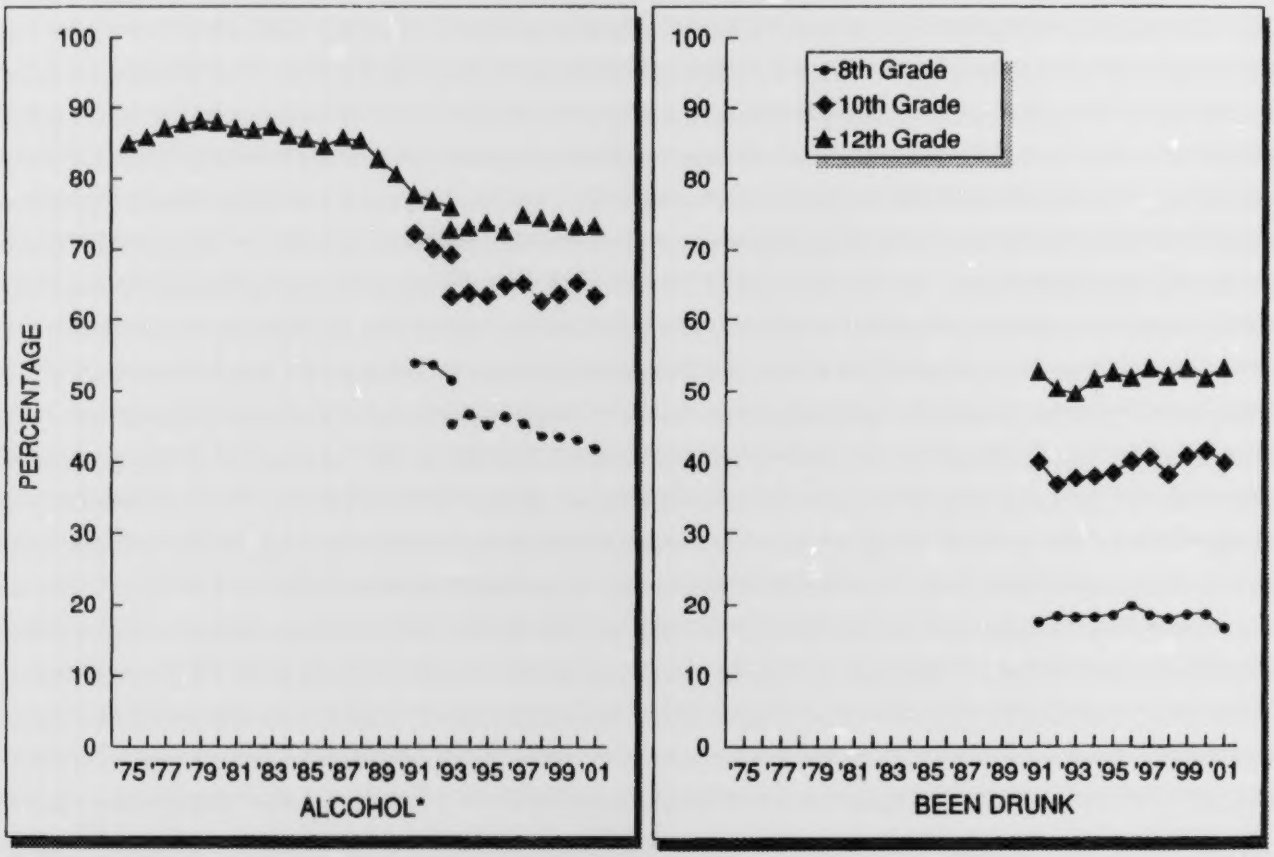


FIGURE 5-4i

Trends in Annual Prevalence of Various Drugs for Eighth, Tenth, and Twelfth Graders



*Beginning in 1993 a revised set of questions on alcohol use was introduced, in which respondents were told that an occasion of use meant "more than just a few sips." The dotted lines connect percentages which are based on data from the revised questions. See text for details.

FIGURE 5-4j

Trends in Two-Week Prevalence of Heavy Drinking for Eighth, Tenth, and Twelfth Graders

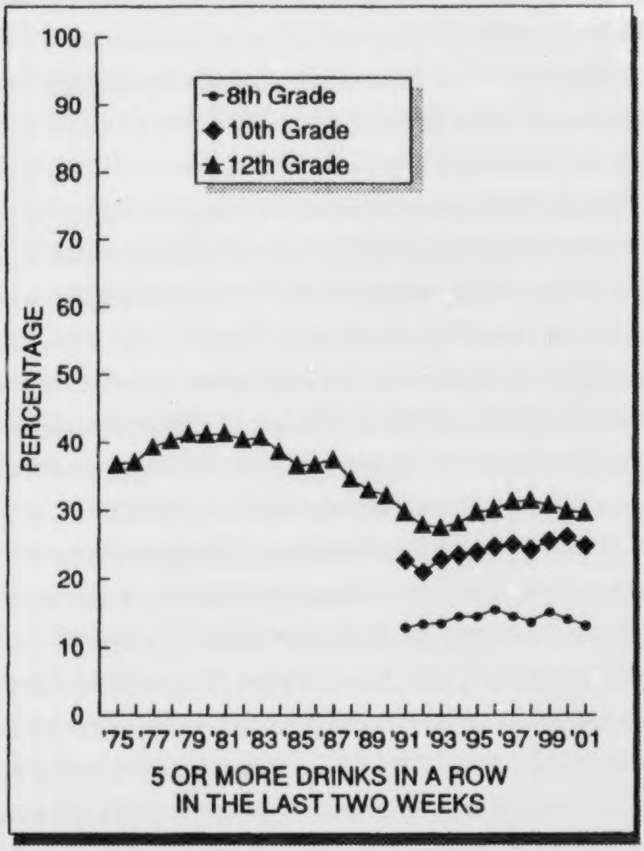


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FIGURE 5-4k

Trends in Thirty-Day Prevalence and Thirty-Day Prevalence of Daily Use of Cigarettes for Eighth, Tenth, and Twelfth Graders

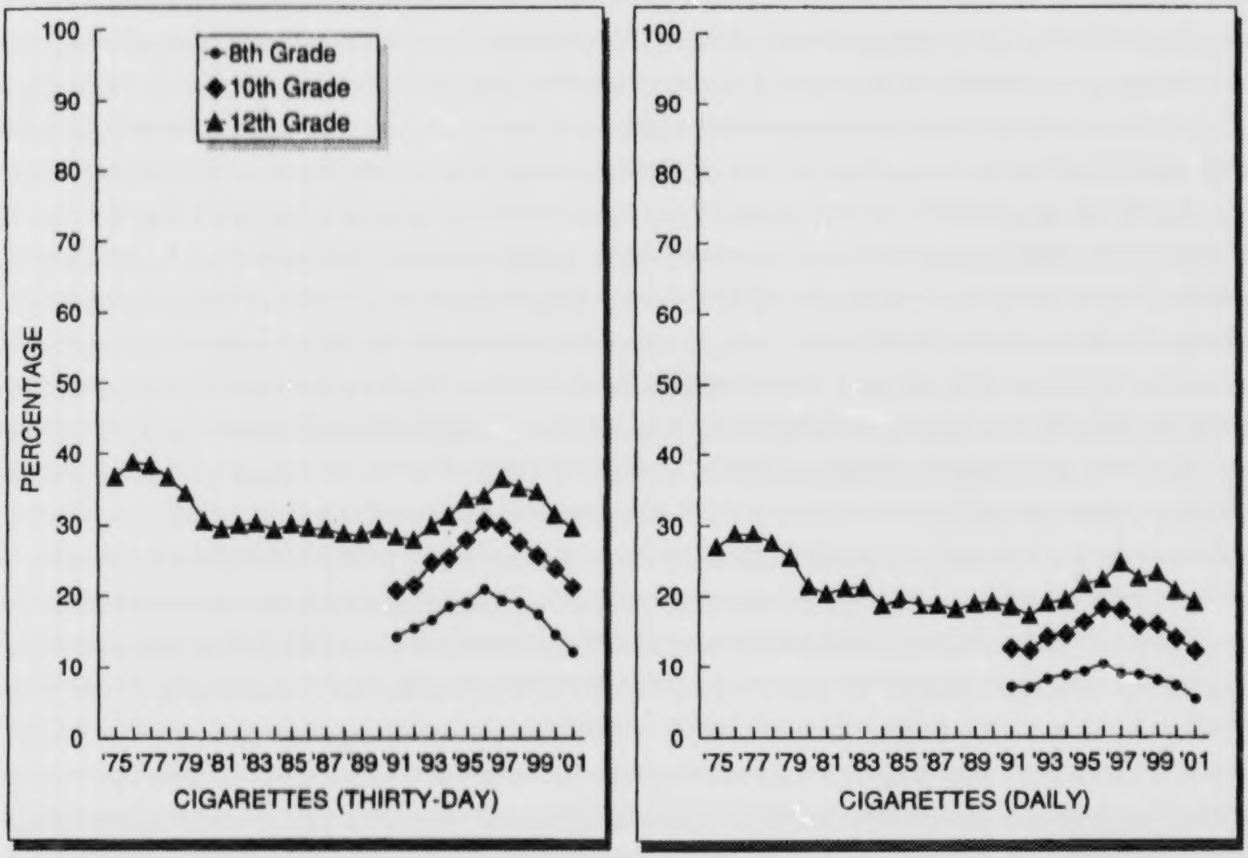
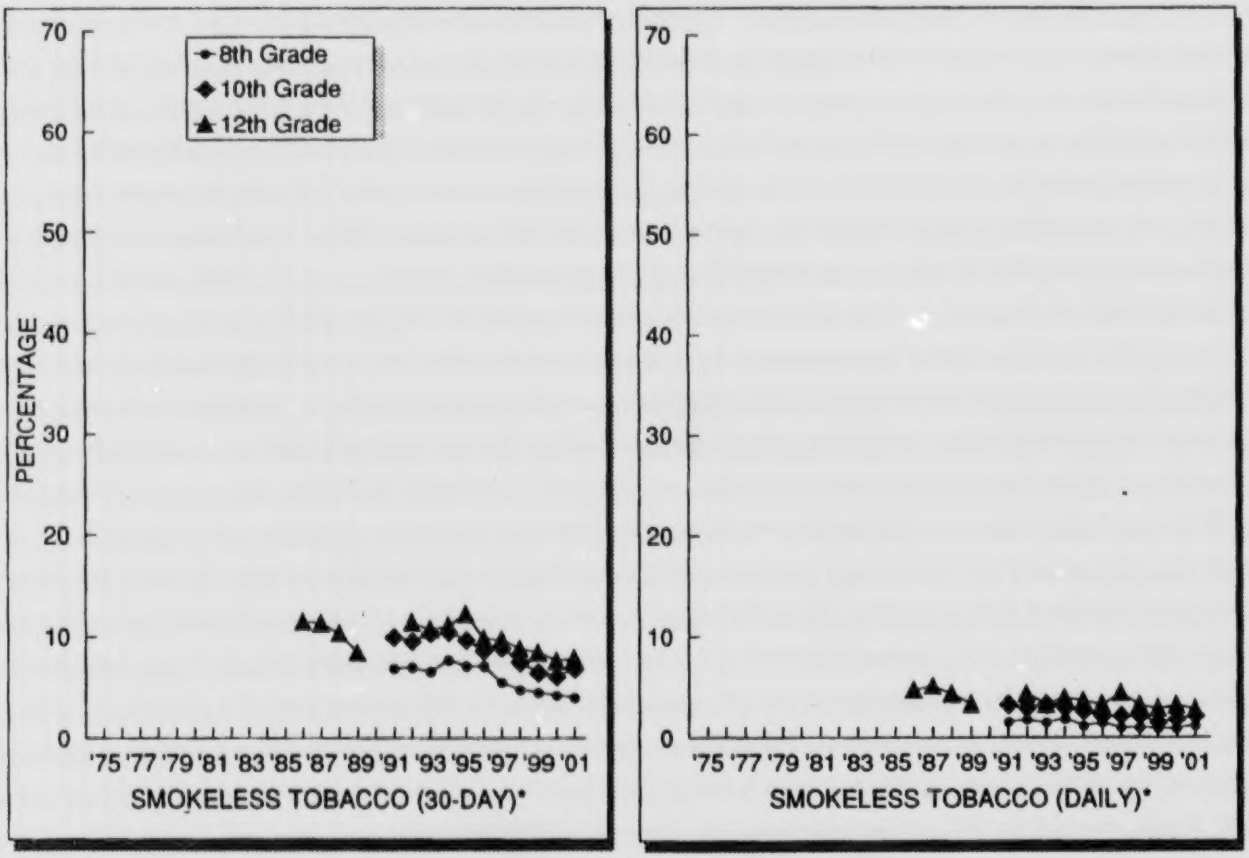


FIGURE 5-41

Trends in Thirty-Day Prevalence and Thirty-Day Prevalence of Daily Use of Smokeless Tobacco for Eighth, Tenth, and Twelfth Graders



*12th graders: Smokeless tobacco data not available in 1990 or 1991.

FIGURE 5-4m

Trends in Thirty-Day Prevalence of Daily Use of Marijuana for Eighth, Tenth, and Twelfth Graders

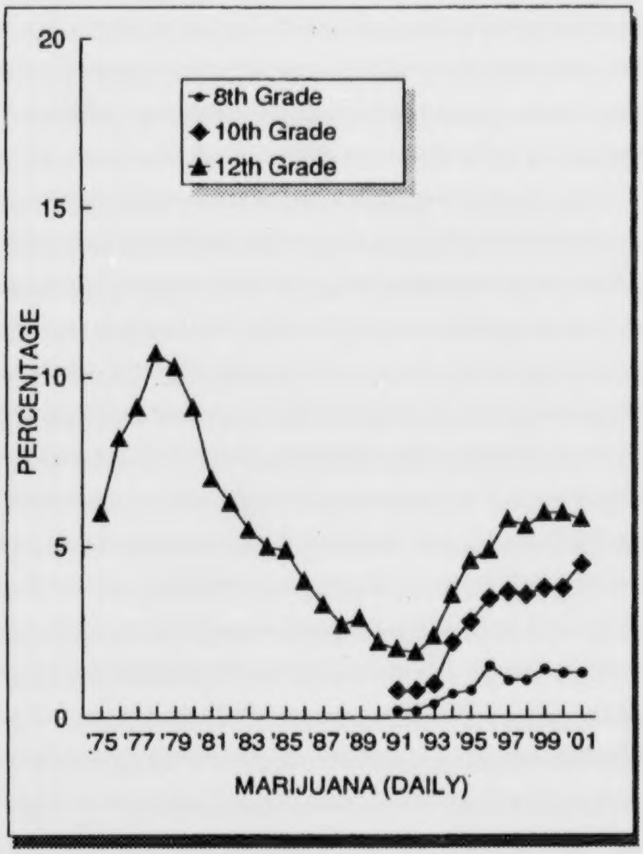


FIGURE 5-4n

Trends in Annual Prevalence of Steroids for Eighth, Tenth, and Twelfth Graders

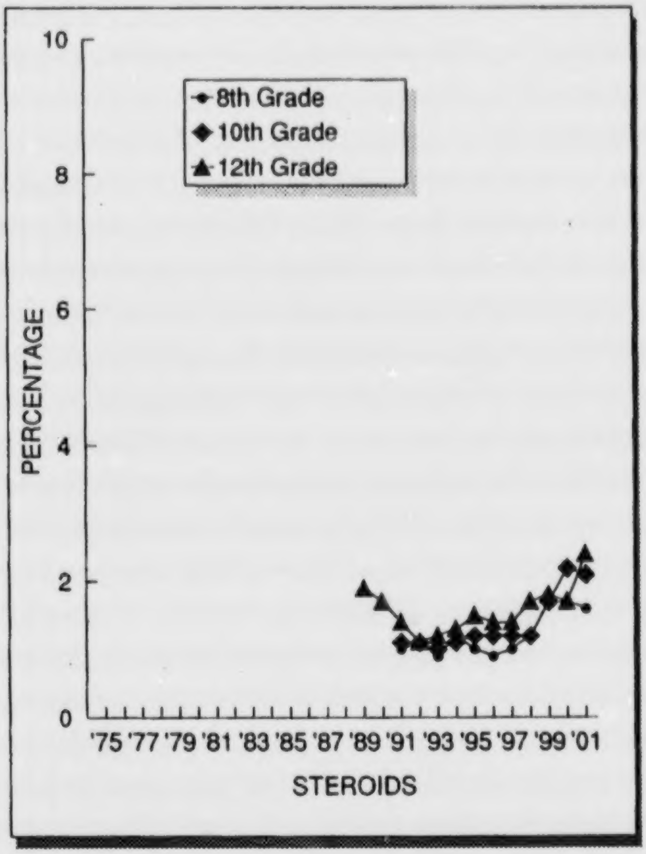
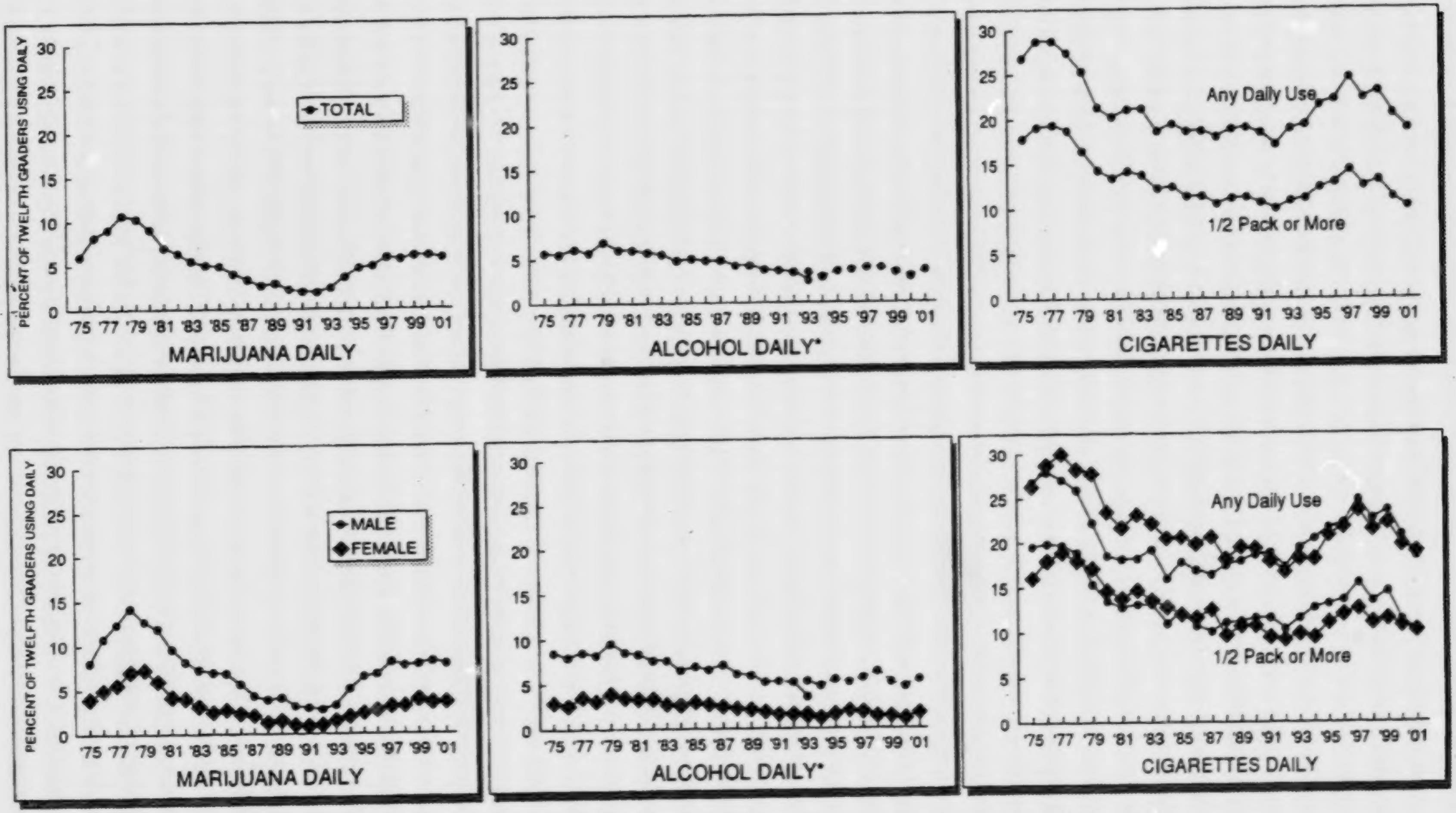


FIGURE 5-5

Trends in Thirty-Day Prevalence of Daily Use of Marijuana, Alcohol, and Cigarettes for Twelfth Graders

by Total and by Gender



NOTE: Daily use for alcohol and marijuana is defined as use on 20 or more occasions in the past thirty days. Daily use of cigarettes is defined as smoking one or more cigarettes per day in the past thirty days.

*The dotted lines connect percentages which have been adjusted. See text for details.

FIGURE 5-6a

Trends in Two-Week Prevalence of Heavy Drinking Among Twelfth Graders

by Gender

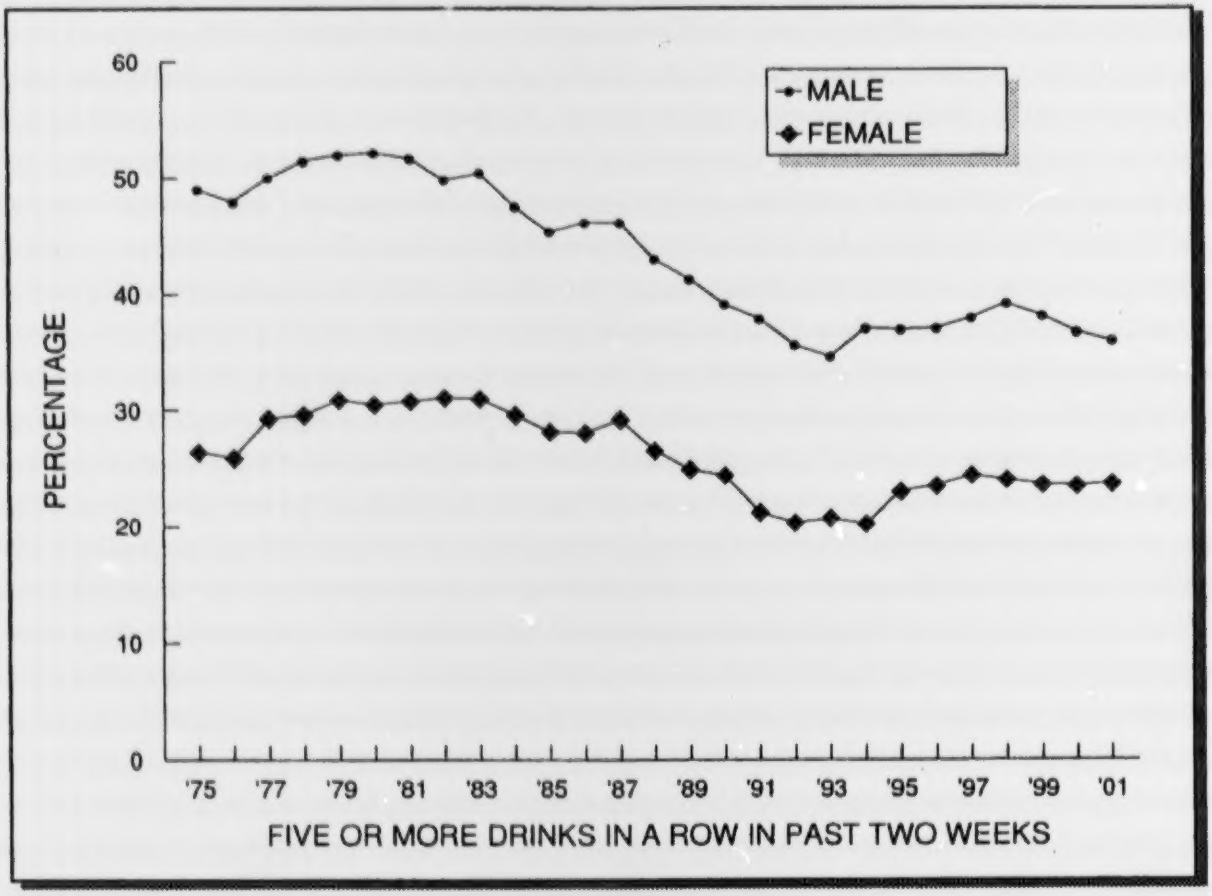


FIGURE 5-6b

Trends in Annual Prevalence of Steroid Use Among Twelfth Graders

by Gender

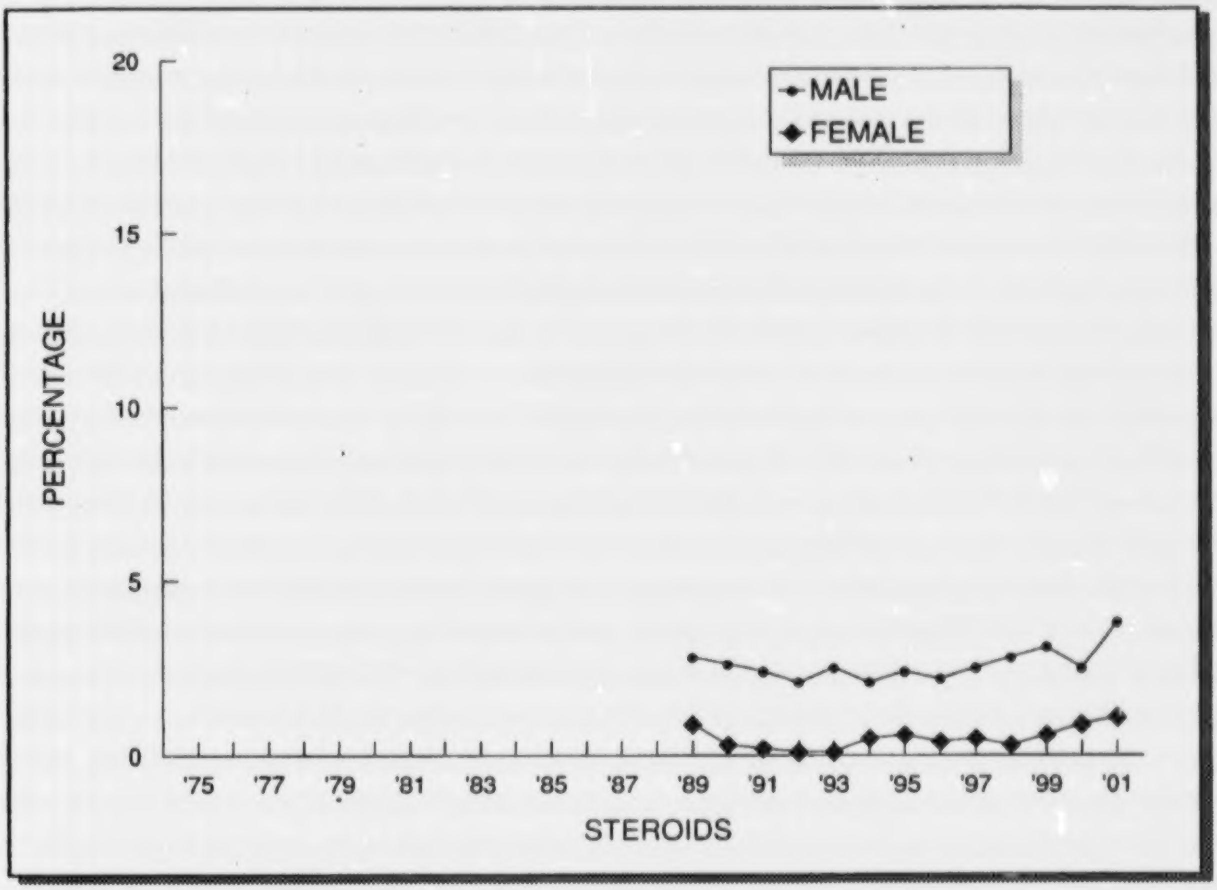
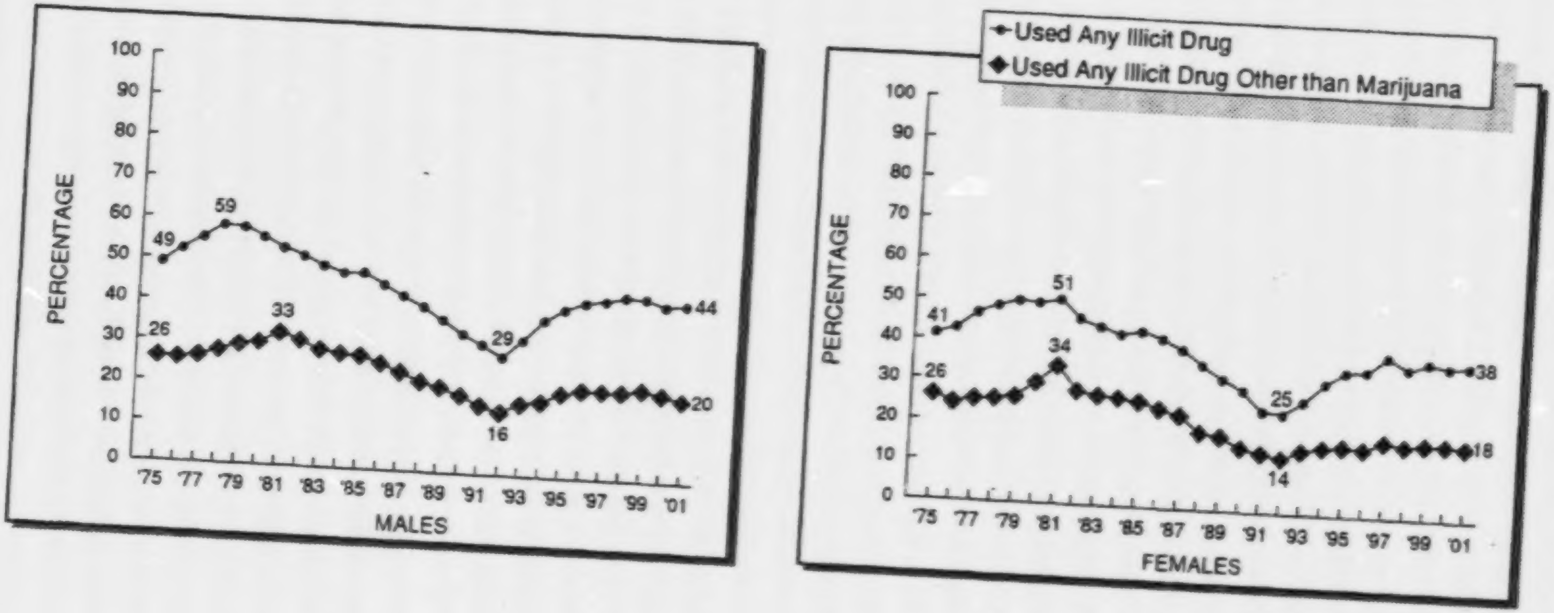


FIGURE 5-7

Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders

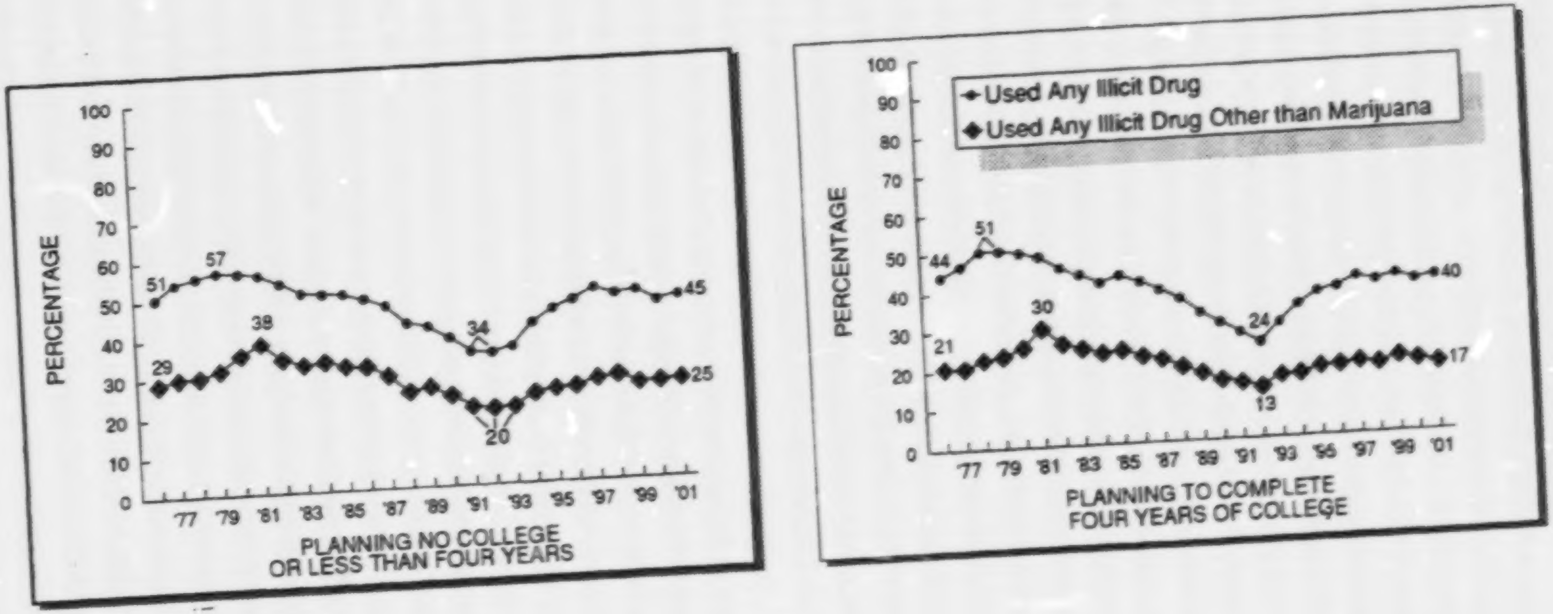
by Gender



NOTE: See Figure 5-3 for relevant footnotes.

FIGURE 5-8

Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders by College Plans



NOTE: See Figure 5-3 for relevant footnotes.

FIGURE 5-9

Trends in Thirty-Day Prevalence of Cigarette Use for Eighth, Tenth, and Twelfth Graders
by College Plans

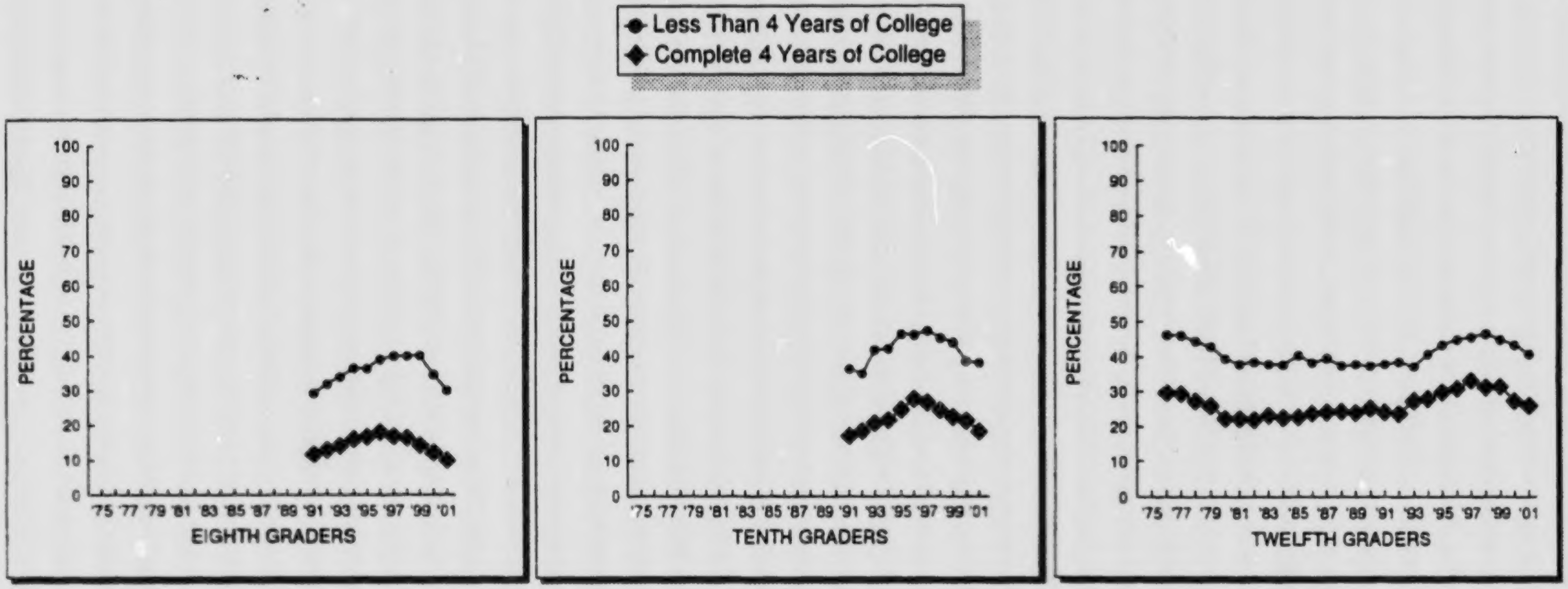
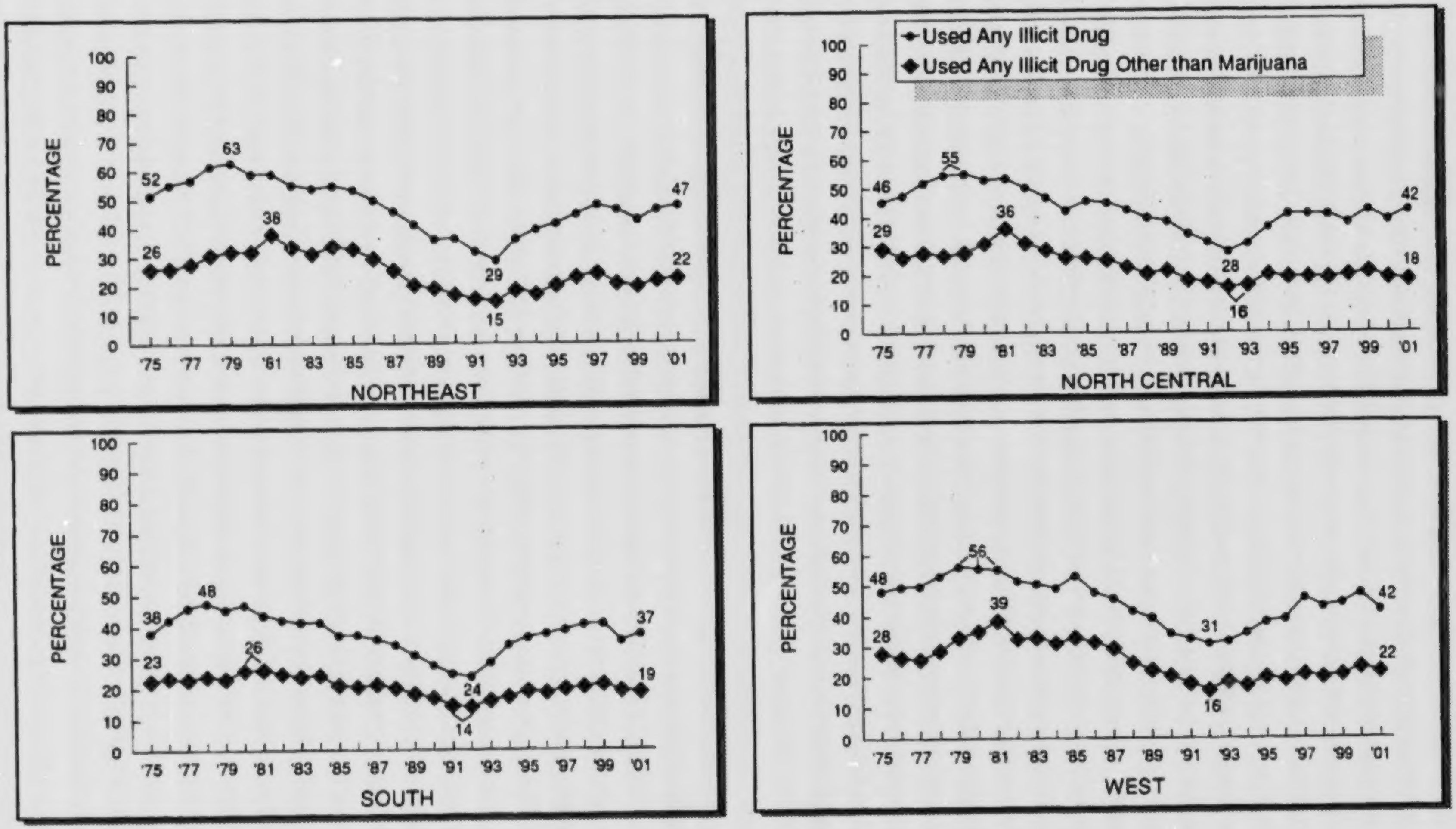


FIGURE 5-10a

Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders
by Region of the Country



NOTE: See Figure 5-3 for relevant footnotes.

FIGURE 5-10b

Trends in Lifetime Prevalence of Cocaine Use for Twelfth Graders
by Region of the Country

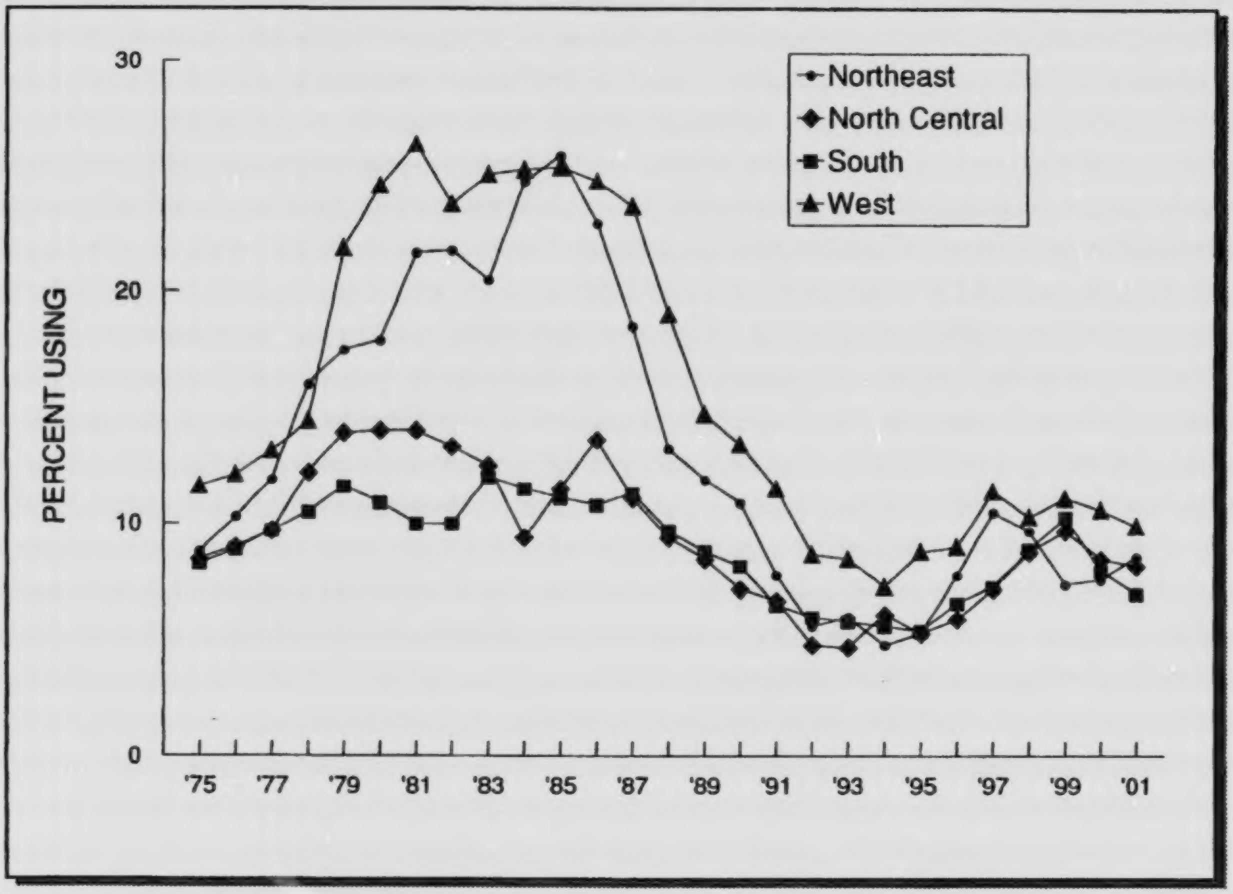


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FIGURE 5-10c

Trends in 30-Day Prevalence of Cigarette Use for Twelfth Graders
by Region of the Country

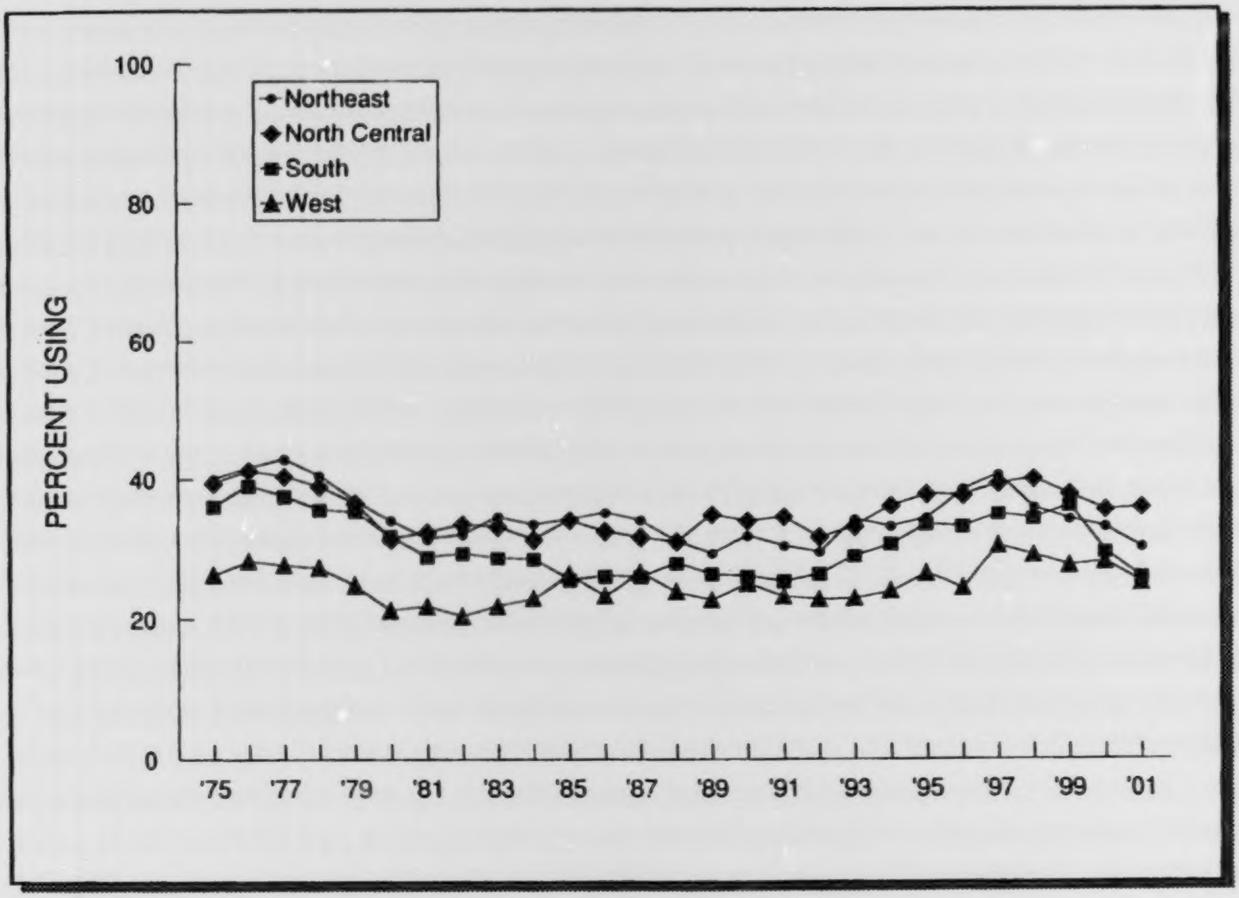
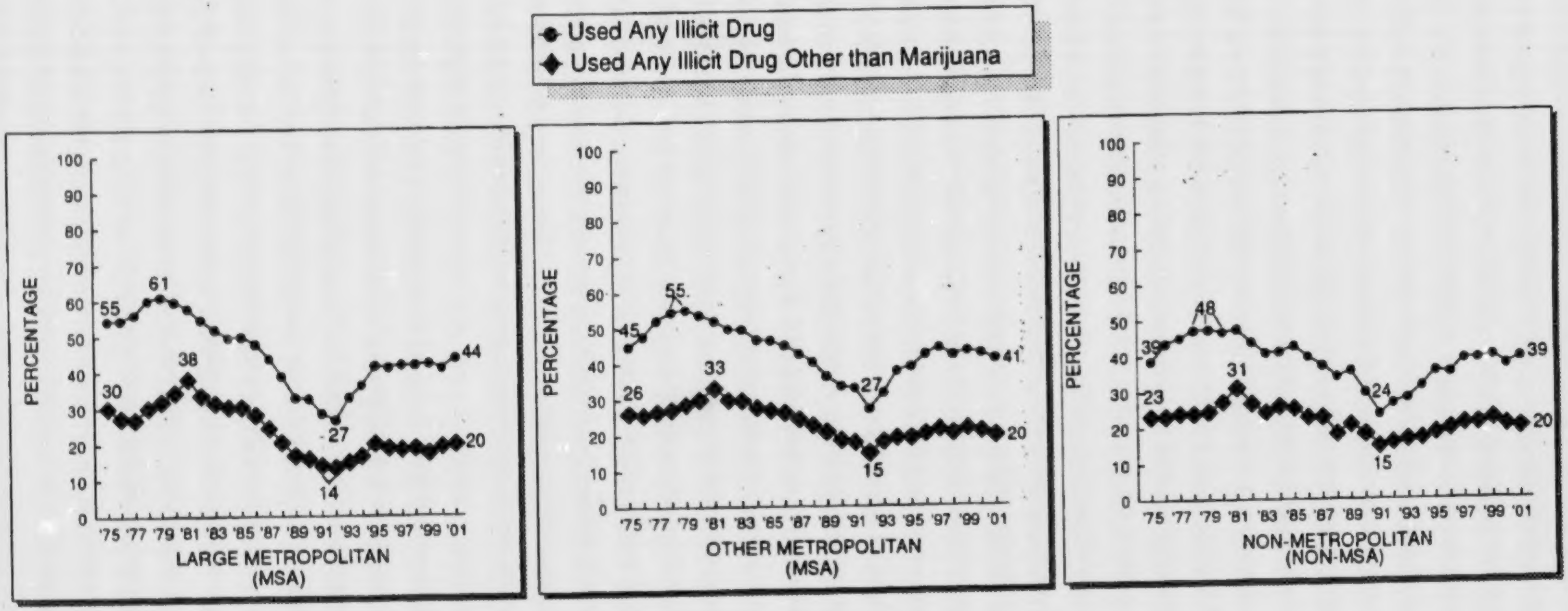


FIGURE 5-11a

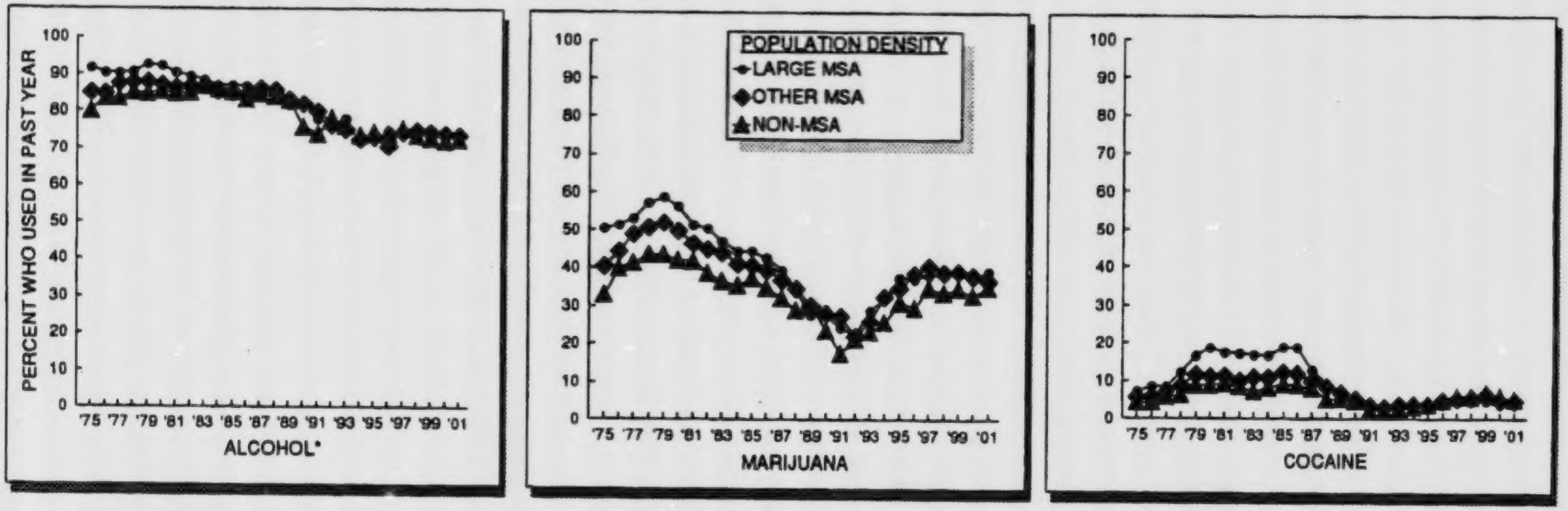
Trends in Annual Prevalence of an Illicit Drug Use Index for Twelfth Graders
by Population Density



NOTE: See Figure 5-3 for relevant footnotes.

FIGURE 5-11b

Trends in Annual Prevalence of Alcohol, Marijuana, and Cocaine Use for Twelfth Graders by Population Density

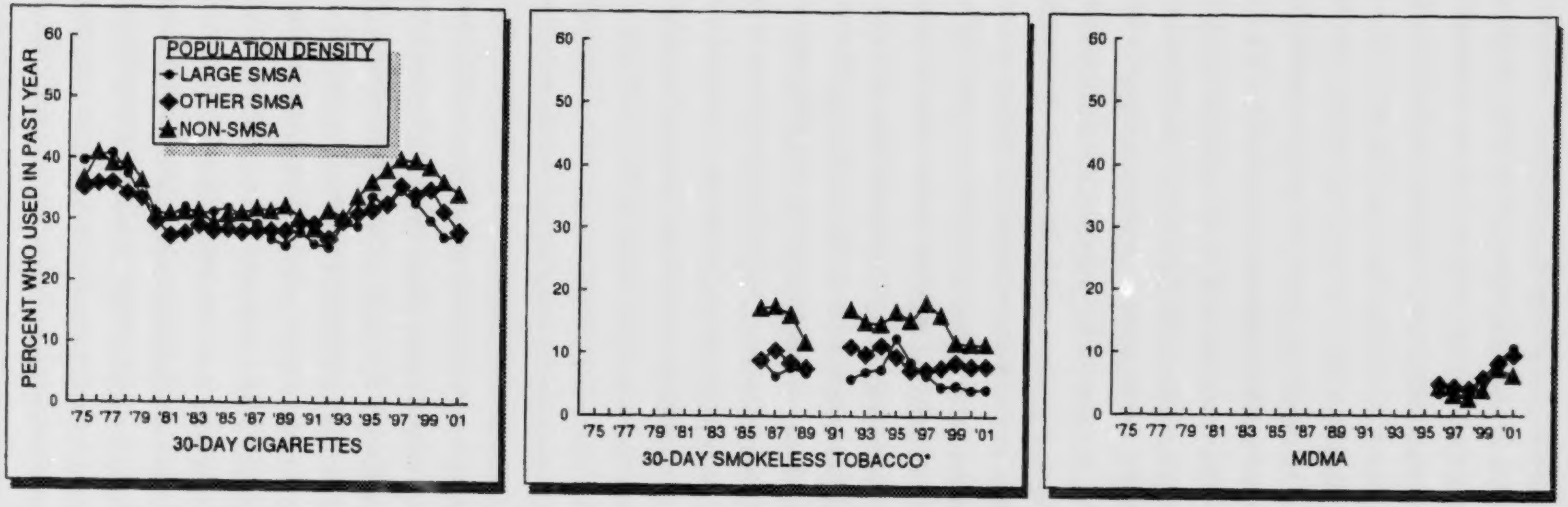


*1993 data points are based on the data from the questionnaire forms containing the original wording of the alcohol questions; from 1994 on data points are based on the revised alcohol questions. See text for details.

FIGURE 5-11c

Trends in Thirty-Day Prevalence of Cigarettes and Smokeless Tobacco, and Annual Prevalence of MDMA Use for Twelfth Graders

by Population Density



*Question was not asked in 1990 or 1991.

FIGURE 5-12a

Marijuana: Trends in Annual Prevalence by Average Education of Parents for Twelfth Graders

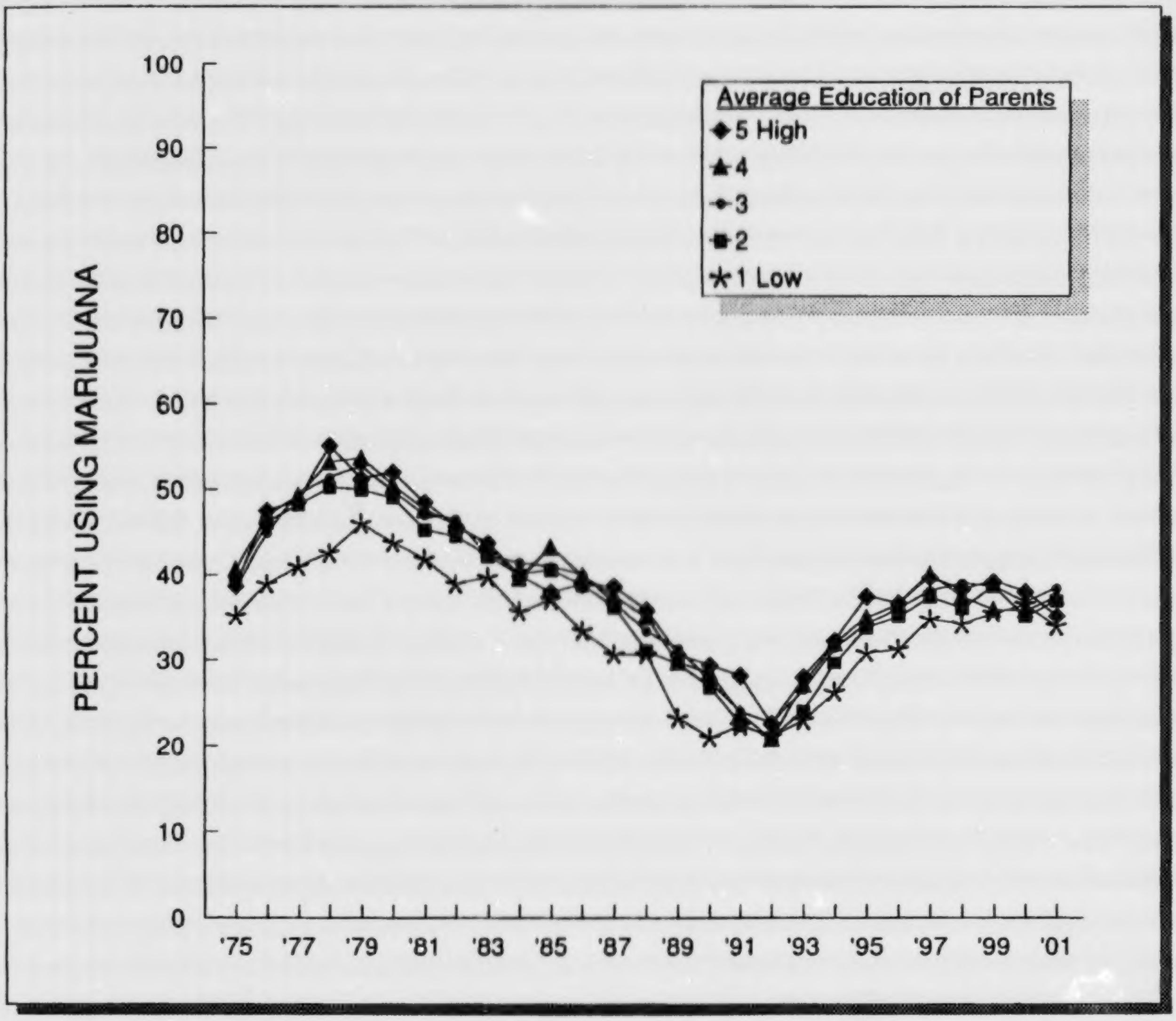


FIGURE 5-12b

Cocaine: Trends in Annual Prevalence by Average Education of Parents for Twelfth Graders

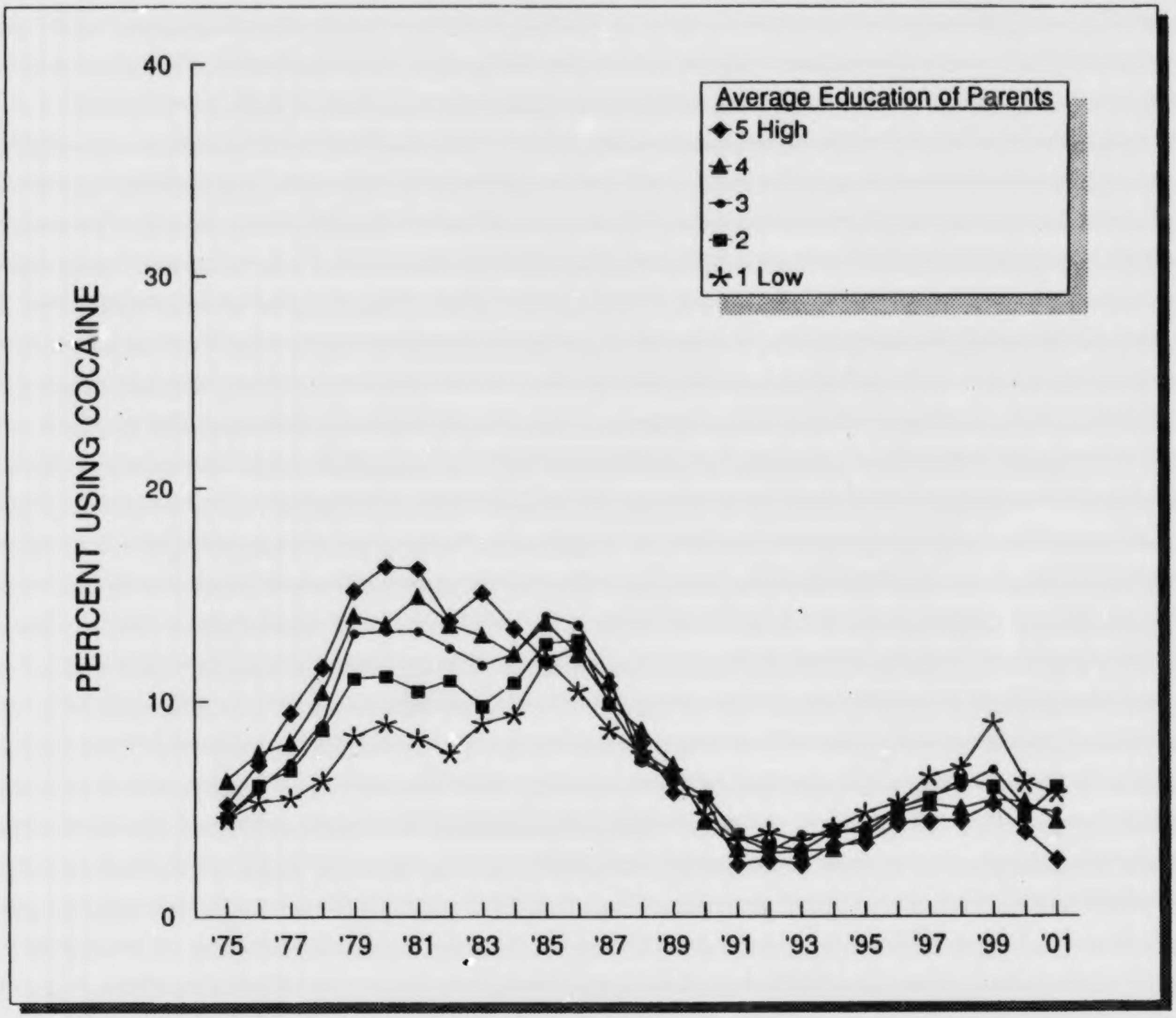


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FIGURE 5-12c

LSD: Trends in Annual Prevalence by Average Education of Parents for Twelfth Graders

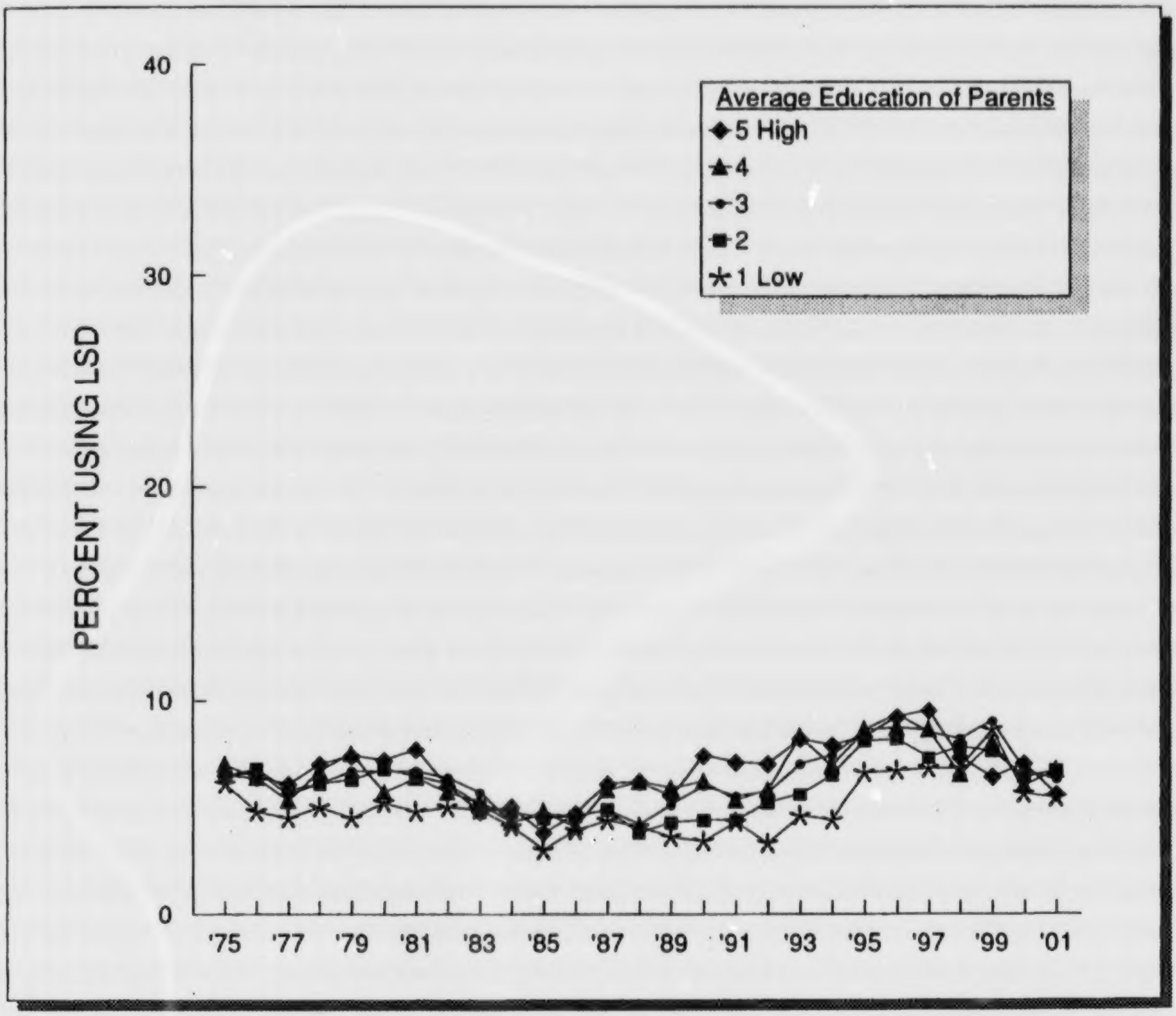
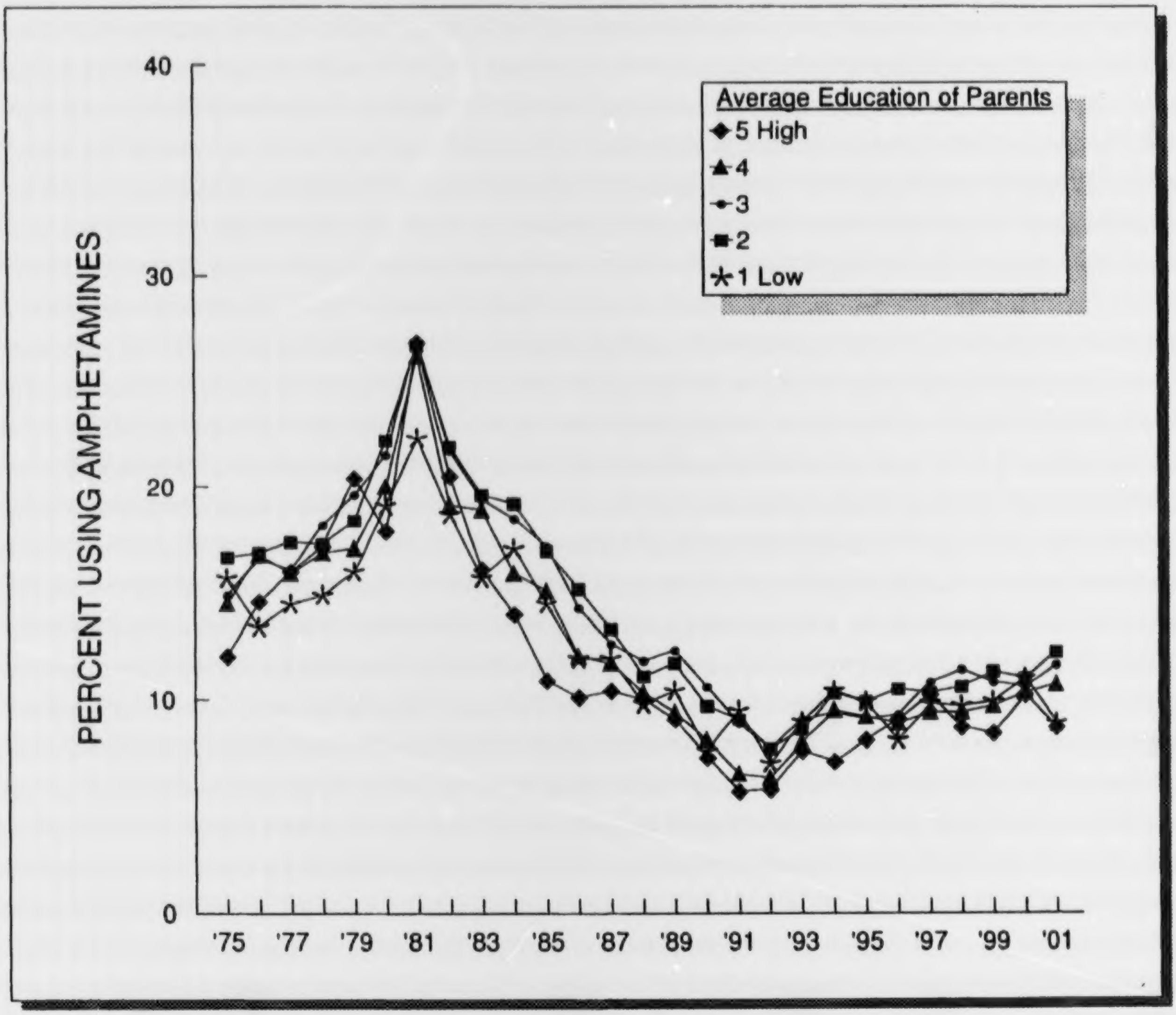


FIGURE 5-12d

Amphetamines: Trends in Annual Prevalence by Average Education of Parents for Twelfth Graders



NOTE: Beginning in 1982 the question about stimulant use (i.e., amphetamines) was revised to get respondents to exclude the inappropriate reporting of non-prescription stimulants. The prevalence rate dropped slightly as a result of this methodological change.

FIGURE 5-12e

Heavy Drinking: Trends in Two-Week Prevalence of 5 or More Drinks in a Row by Average Education of Parents for Twelfth Graders

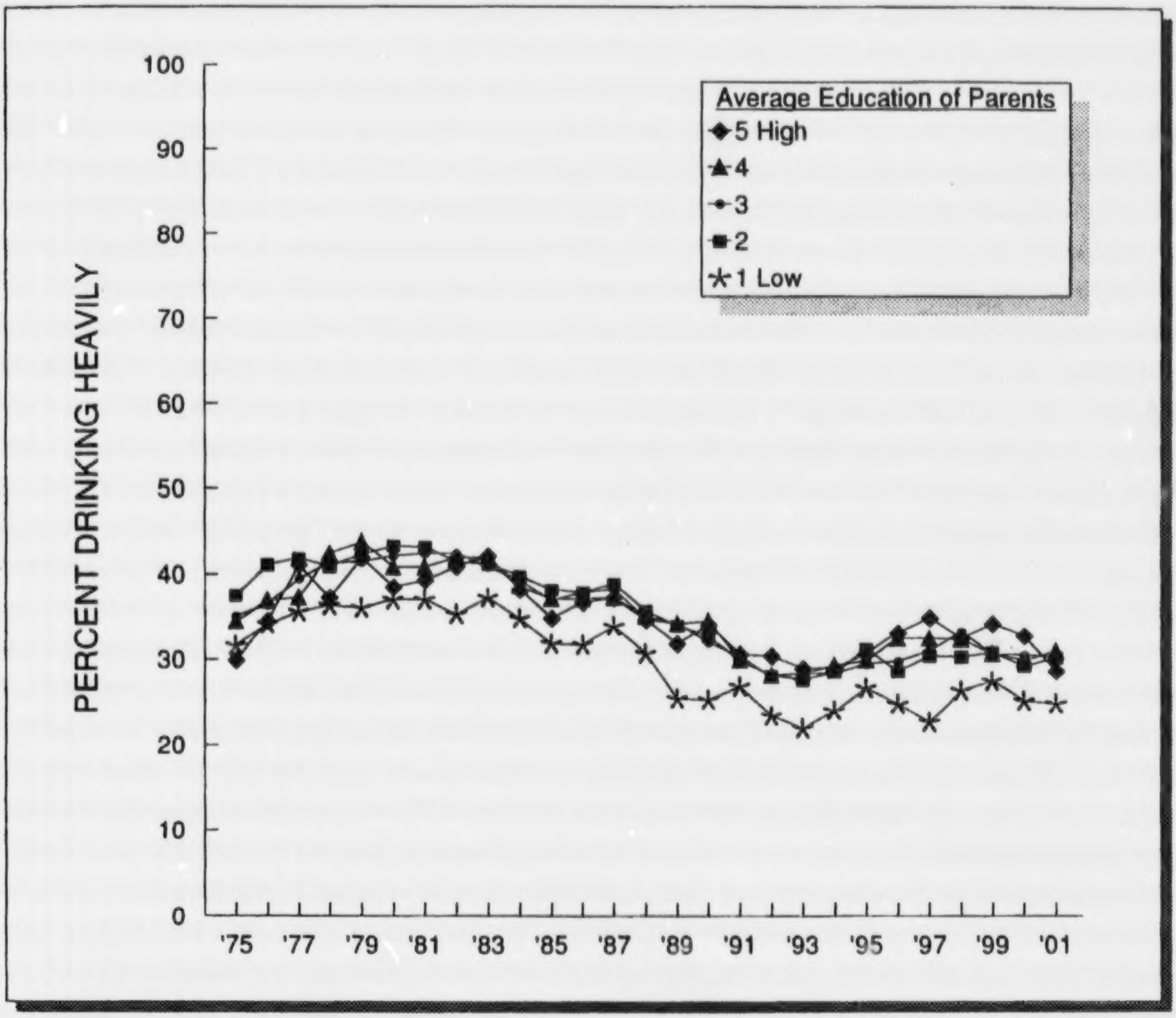


FIGURE 5-12f

Cigarettes: Trends in Daily Prevalence by Average Education of Parents for Twelfth Graders

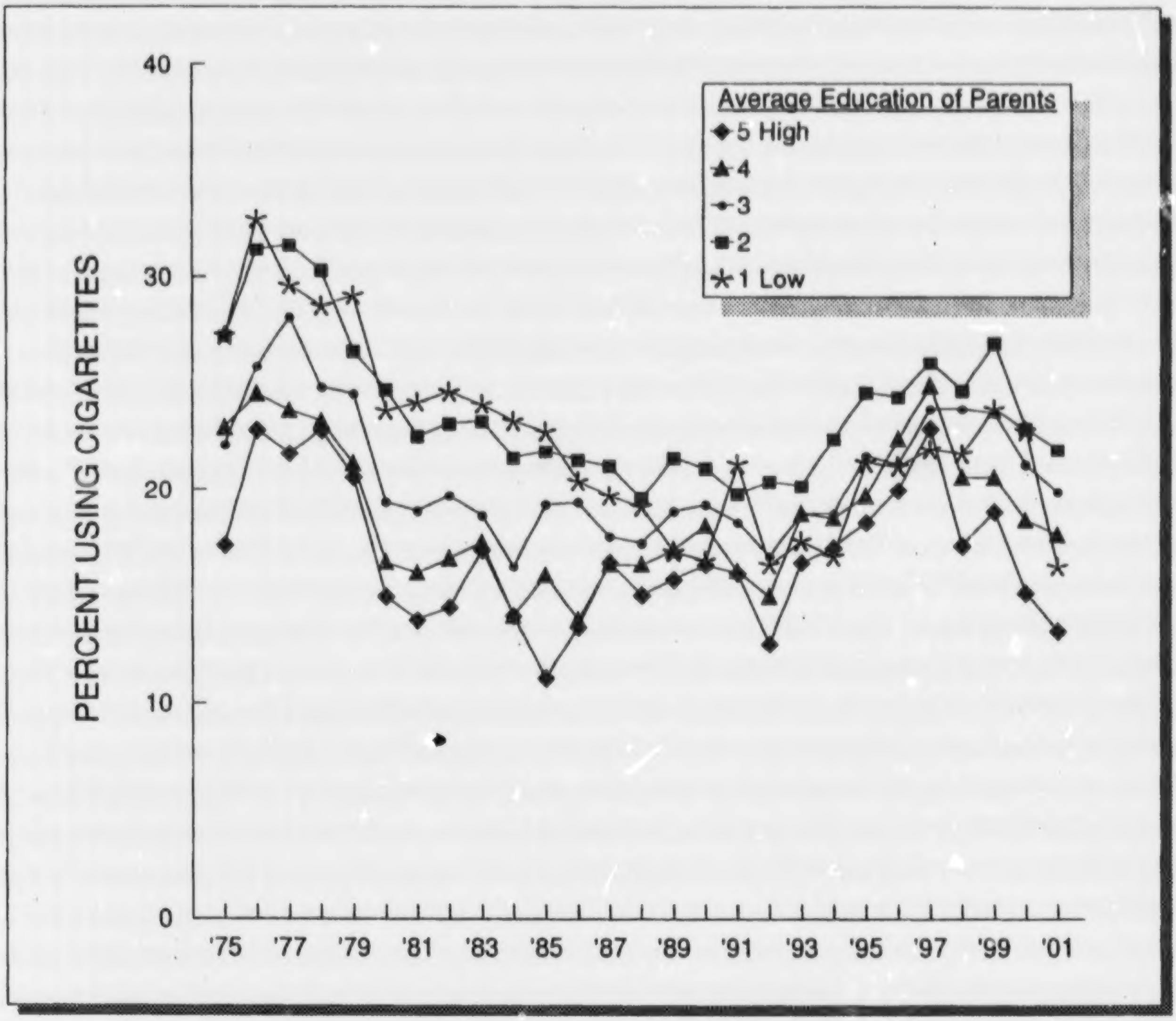
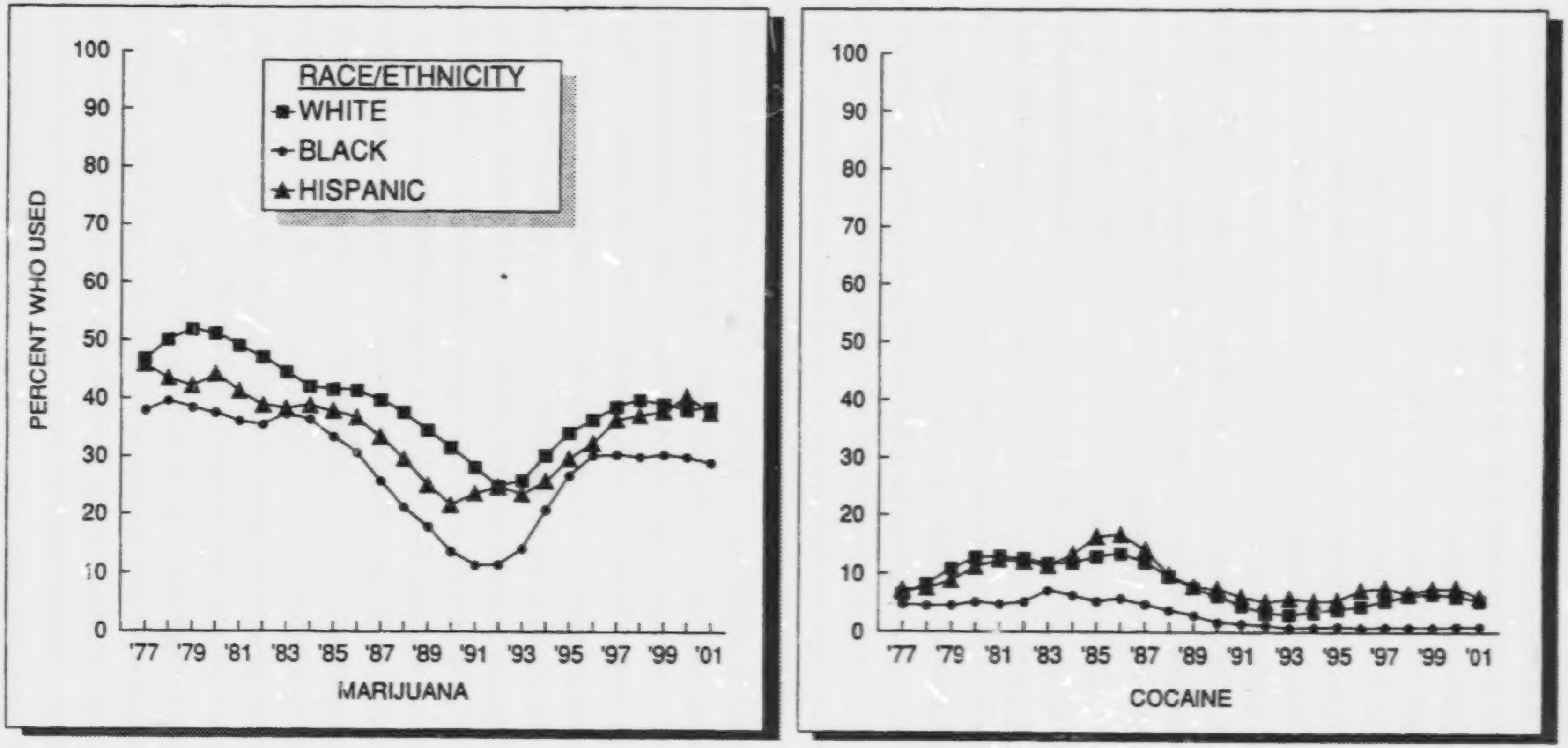


FIGURE 5-13a

Trends in Annual Prevalence of Marijuana and Cocaine Use for Twelfth Graders

by Race/Ethnicity

(Two-year moving average*)



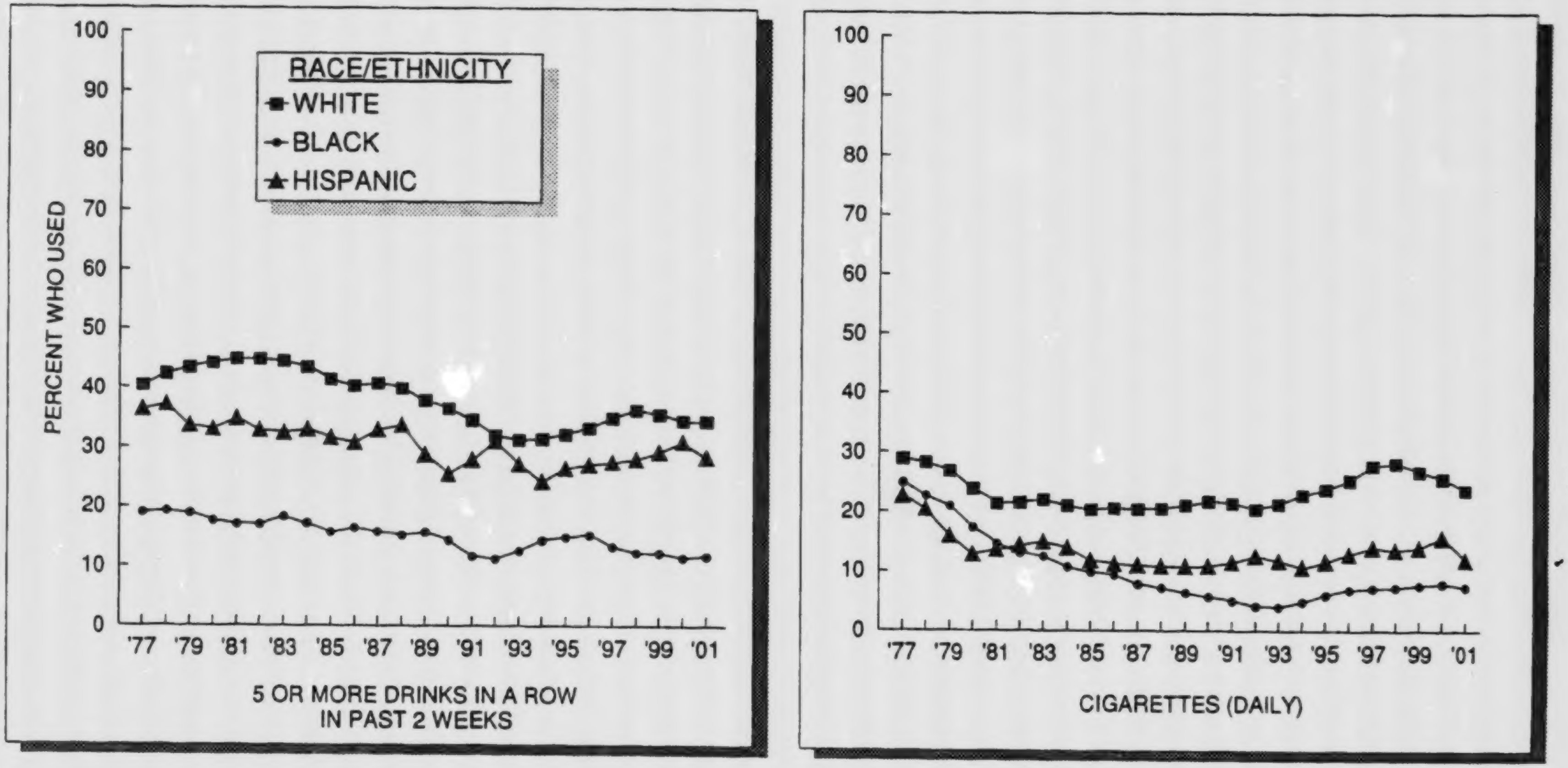
*Each point plotted here is the mean of the specified year and the previous year.

FIGURE 5-13b

Trends in Prevalence of 5 or More Drinks in a Row in the Past 2 Weeks and Daily Use of Cigarettes for Twelfth Graders

by Race/Ethnicity

(Two-year moving average*)



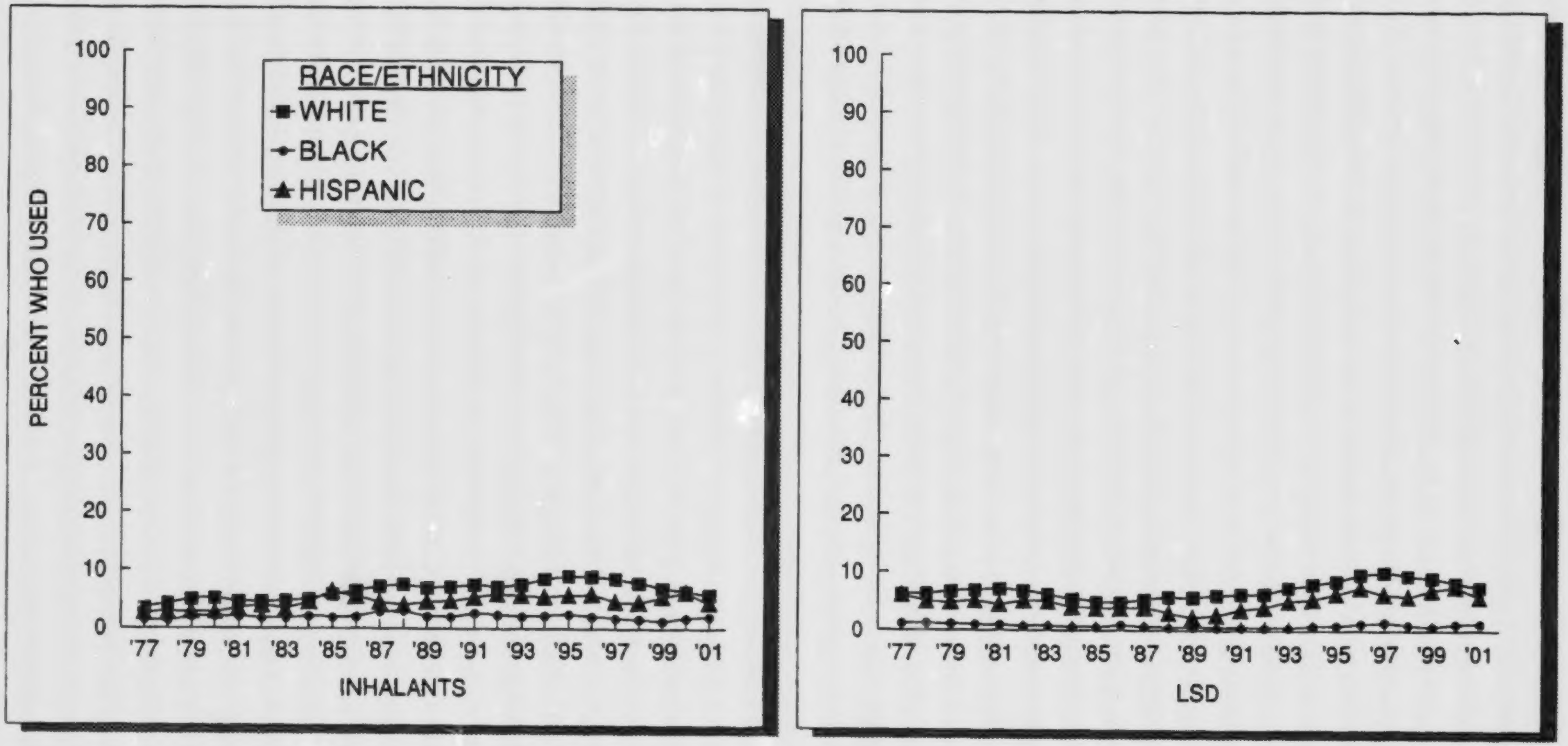
*Each point plotted here is the mean of the specified year and the previous year.

FIGURE 5-13c

Trends in Annual Prevalence of Inhalant and LSD Use for Twelfth Graders

by Race/Ethnicity

(Two-year moving average*)



*Each point plotted here is the mean of the specified year and the previous year.

Chapter 6

INITIATION RATES AND TRENDS IN INITIATION RATES AT LOWER GRADE LEVELS

For many years Monitoring the Future has been tracking the age (or more precisely, the grade level) at which American young people say that they started using the various licit and illicit drugs. It is important to know the age at which they begin to use various drugs, in part because that information provides a guide to the timing and nature of various interventions in the school, the home, and the larger society—for example, media campaigns or in-school curricula. Any such interventions are likely to be considerably less effective in preventing drug use if administered after the ages of peak initiation. They also may be less effective if they substantially precede this decision-making period. We know that users' ages of peak initiation vary according to drug and tend to progress from drugs seen as the least risky, deviant, or illegal toward those that are more so.

Age of initiation data exist for high school seniors since 1975. The results reported in this series of monographs provide a retrospective view of trends in lifetime prevalence of use at earlier grade levels. Because these trends span a much longer time period, we continue to include here the series of figures based on seniors' responses, even though we now measure drug usage rates directly from eighth and tenth graders. We also have included retrospective figures for eighth graders' reported grade of first use.

One would not necessarily expect today's eighth, tenth, and twelfth graders to give the same retrospective prevalence rate for a drug, even for a given grade level (say by sixth grade), because the three groups differ in a number of ways. These differences can be summarized as follows:

- The lower grades contain the eventual school dropouts, while twelfth grade does not. The lower grades also have lower absentee rates. For any given year, both factors should cause the prevalence of use rates derived directly from eighth graders to be higher for a given calendar year than the retrospective prevalence rates for eighth grade derived from the same cohort of young people who are still students in tenth grade or twelfth grade.

- Since each class cohort was in eighth grade in a different year, any broad secular (historical) trend in the use of a drug could contribute to differences in respondents' reports of their experiences when they were in eighth grade.

- Since the eighth, tenth, and twelfth graders are in three different class cohorts, any lasting differences among cohorts ("cohort effects") could contribute to a difference at any grade level, including eighth grade.

Two types of method artifacts could also explain observed differences in the retrospective reports of use by eighth, tenth, and twelfth graders:

- Memory errors are more likely for the older respondents. They may forget that an event ever occurred (although this is unlikely for use of drugs) or they may not accurately remember *when* an event occurred. For example, an event may be remembered as having occurred more recently than it actually did—a kind of "forward telescoping" of the recalled timing of events.

- The definition of the eligible "event" may change as a respondent gets older. Thus, an older student may be less likely to include an occasion of taking a sip from someone's beer as an alcohol use event, or an older student may be more likely to exclude appropriately an over-the-counter stimulant when asked about amphetamine use events. While we attempt to ask the questions as clearly as possible, some of these drug definitions are fairly subtle and are likely to be more difficult for the younger respondents. Indeed, we have omitted from this report eighth and tenth graders' data on their use of barbiturates and narcotics other than heroin precisely because we judged them to contain erroneous information.[49]

INCIDENCE OF USE BY GRADE LEVEL

Tables 6-1 through 6-3 provide the retrospective initiation as reported by students surveyed in eighth, tenth, and twelfth grades, respectively. Obviously, the older students have a larger age span over which they can report initiation. Table 6-4 combines the retrospective initiation rates from all three sets of respondents in order to facilitate a comparison of reported initiation rates by particular grade levels.

The set of questions from which the data are derived have a common stem: "When (if ever) did you FIRST do each of the following things? Don't count anything you took because a doctor told you to." The first event is "smoke your first cigarette," followed by "smoke cigarettes on a daily basis," followed by "try an alcoholic beverage—more than a just a few sips," etc. The answer alternatives are stated in terms of grade level.

- Eighth-, tenth-, and twelfth-grade students all retrospectively reported very low usage rates by the end of sixth grade for ***LSD***, ***crack cocaine***, ***cocaine powder***, ***heroin***, and ***steroids*** (all 1% or lower) and for ***hallucinogens***, ***cocaine***, and ***tranquilizers*** (all less than 1.5%). Any use of ***amphetamines*** by sixth grade was reported by 3% or fewer.

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[49] We have found that follow-ups of high school seniors into young adulthood lead to a higher recanting rate for the psychotherapeutic drugs, in contrast to the illegal drugs. We interpret this discrepancy as reflecting, in part, a better understanding of the distinctions between prescription and non-prescription drugs in young adulthood. See Johnston, L. D. & O'Malley, P. M. (1997). The recanting of earlier reported drug use by young adults. In L. Harrison & A. Hughes (Eds.), *The validity of self-reported drug use: Improving the accuracy of survey estimates* (pp. 59-80). (NIDA Research Monograph 167). Rockville, MD: National Institute on Drug Abuse.

- Among the eighth-grade respondents in 2001, 7% of them said they had tried ***marijuana*** by the end of sixth grade, or about one in every 14. The older respondents give lower retrospective estimates of their marijuana use by sixth grade: 5.0% among tenth-grade respondents and 2.4% among twelfth-grade respondents.

- In general, the legal drugs (***alcohol*** and ***tobacco***) are the most likely to have been initiated at an early age, with ***inhalants*** and ***marijuana*** likely to have come next.

- Cigarette smoking tends to be initiated particularly early. Based on the data from current eighth graders (Table 6-1), their peak years for initiation of ***cigarette*** smoking appear to have been in the sixth and seventh grades (17%)—or between ages 11 and 13—but a considerable number initiated smoking even earlier. In fact, 16% of the 2001 eighth-grade respondents reported having had their first cigarette by fifth grade. Based on the data from twelfth graders, their ***daily smoking*** was initiated primarily in grades 7 through 11, and then dropped off in grade 12 (see Table 6-3).

  Because educational attainment is very highly correlated with smoking, the differential inclusion of eventual dropouts could account for much of the difference between sixth-grade smoking rates derived in 2001 from eighth graders (25%) and those derived from twelfth graders (15%). In addition, teen smoking rates were changing in the interval between 1995, when today's twelfth graders were in sixth grade, and 1999, when today's eighth graders were in sixth grade.

- ***Smokeless tobacco*** use also tends to be initiated quite early, as Tables 6-1 through 6-3 illustrate, with grades 7 through 10 tending to show the highest rates of initiation.

- ***Inhalant*** use tends to occur early, with peak initiation rates in grades 6 through 9. In fact, among eighth-grade respondents in 2001, some 7% had already tried inhalants by the end of the fifth grade.

  Of the illicit drugs, only inhalants show very large differences among the three grade levels responding. While only 2% of the twelfth graders in 2001 reported using inhalants by the end of sixth grade, a much higher 11% of the 2001 eighth graders reported such use by sixth grade. Although any of the explanations offered earlier might explain these differences, we believe that early inhalant use may be particularly associated with dropping out. In addition, use of non-nitrite inhalants such as glues, aerosols, and butane had been increasing for some time (up to 1995), and these inhalants tend to be used at younger ages.

- For ***alcohol***, we are inclined to rely on the data from seniors, which suggest that the peak years of initiation are ninth through eleventh grades. While the first occasion of ***drunkenness*** is most likely to occur in grades 7 through 11, some 7% of the 2001 eighth graders reported first having been drunk by the end of sixth grade, and 23% report having been drunk by the end of eighth grade.

  Alcohol use by the end of sixth grade is reported by 26% of the 2001 eighth graders but by only 9% of the 2001 twelfth graders. Several factors may contribute to this difference. One is that eventual dropouts undoubtedly are more likely than average to drink at an early age. Another is related to the issue of what is meant by "first use." The questions for all grades refer specifically to the first use of "an alcoholic beverage—more than just a few sips," but it is likely that the older students (twelfth graders) are more inclined to report only use that is *not* adult-approved and not to count having less than a glass with parents or for religious purposes. Younger students (eighth graders) are less likely to have had a full drink or more and may be more likely to report first use of a limited amount. Thus, the eighth-grade data probably exaggerate the phenomenon of having more than a few sips, whereas the twelfth-grade data may understate it. Note that the data from the three groups of respondents tend to converge as we ask about lifetime alcohol use by the time they reach higher grade levels.

- For ***marijuana***, the highest initiation rates are seen in grades 7 through 11, although 7% of the 2001 eighth graders reported that they had tried marijuana by sixth grade.

- The illicit drugs other than marijuana and inhalants generally do not reach peak initiation rates until the high school years (grades 10 through 12), consistent with the progression model noted earlier. ***Amphetamines***, specifically, showed a high initiation rate in grades 9 through 12.

- Of all the twelfth-grade respondents who said they had tried a drug by the end of twelfth grade, the proportion of users saying that they had initiated that use *prior to grade 10* is as follows: ***inhalants*** (69%), ***nitrite inhalants*** (58%), ***marijuana*** (56%), ***methaqualone*** (55%), ***heroin*** (50%), ***PCP*** (49%), ***barbiturates*** (46%), ***amphetamines*** (41%), ***hallucinogens*** and ***steroids*** (both 38%), ***LSD*** (37%), ***other forms of cocaine*** and ***other hallucinogens*** (both 36%), ***cocaine*** (34%), ***tranquilizers*** (33%), and ***crack*** and ***narcotics other than heroin*** (both 32%). Note that such an ordering can be influenced considerably by secular trends in use.

TRENDS IN LIFETIME PREVALENCE AT EARLIER GRADE LEVELS

Using the retrospective data provided by members of each senior class concerning their grade of first use, it has been possible to reconstruct lifetime-prevalence-of-use trend curves for lower grade levels over many earlier years. Obviously, data from school dropouts are not included in any of the curves based on twelfth graders. Figures 6-1 through 6-25 show the reconstructed lifetime prevalence curves for earlier grade levels for most drugs. When comparable data are available, starting with Figure 6-4, there is also a panel showing retrospective prevalence curves based on data gathered from eighth graders, who have been included in the study since 1991.[50] These curves *should* include data from nearly all the eventual dropouts.

We have chosen to speak here about changes in lifetime prevalence attained at the various grade levels, rather than in terms of "average age of initiation." Average age of initiation (first use) is another way to talk about the type of data presented in this chapter, but we think that it can be misleading at times. For example, the average age of initiation could be lower in more recent classes because fewer people are initiating use at *later* ages than were doing so previously (perhaps due to a downward secular trend at that time); and there may be no more of them starting at younger ages at all. Or the average age of initiation could be rising because more people are initiating at older ages (perhaps because of a recent upward secular trend), again with no necessary change in the proportion starting at young ages. We suspect that most readers, when they hear that the average age of initiation has gone down, conceptualize this fact as reflecting some shift in the propensity to use at younger ages, independent of any secular trends, and therein lies the potential confusion. For this reason, we have chosen to talk in terms of trends in lifetime prevalence attained by each class of students as they reach different grade levels.

- Based on the retrospective data provided by successive twelfth-grade classes, Figure 6-1 shows the trends at each grade level for lifetime use of ***any illicit drug***. It shows that all grade levels had a continuous increase in illicit drug involvement through the 1970s. Fortunately, the increase in use below seventh grade was quite small; the retrospective rate in 1969 (based on the class of 1975) for sixth grade or below was 1.1%. That figure increased modestly through 1978, leveled for a time, and then declined in the late 1980s, from 3.5% in 1986 to 2.1% in 1989. The lines for the other grade levels all show much steeper upward slopes, followed by earlier and longer declines. For example, about 37% of tenth graders in 1973 had used some illicit drug compared with 52% by 1980. This statistic fell to 28% by 1991 and then leveled. It increased from 1993 to 1995, before leveling again in 1996.

- Most of the early increase in ***any illicit drug use*** was due to increasing proportions using marijuana. We know this from the results in Figure 6-2, showing trends for each grade level in the proportion having used ***any illicit drug other than marijuana*** in their lifetime. Compared with Figure 6-4 for marijuana use, these trend lines are relatively flat throughout the 1970s and, if anything, begin to taper off among ninth and tenth graders between 1975 and 1977. The biggest cause of increases in these curves from 1978 to 1981 was the rise in reports of ***amphetamine*** use. As noted earlier, we suspect that at least some of this rise was artifactual. If amphetamine use is removed from the calculations, even greater stability is shown in the proportion using illicit drugs other than marijuana or amphetamines (see Figure 6-3).

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[50] Note that the scale used in the graphs based on data from eighth graders is an expanded version of the scale used for twelfth graders (because the prevalence rates are generally lower). This tends to exaggerate changes in the eighth-grade graphs relative to those in the twelfth-grade graphs.

- Similarly, much of the increase in illicit drug use in the early 1990s was due to increases in marijuana use. The inclines in the lines are far sharper in Figure 6-1 than in Figure 6-2.

- As the top panel of Figure 6-4 shows, throughout the 1970s the lifetime prevalence of ***marijuana*** use rose steadily at all grade levels down through the seventh and eighth grades. Beginning in 1980, lifetime prevalence of marijuana use began to decline in grades 9 through 12. Declines in grades 7 and 8 began a year later, in 1981.

  There was also some small increase in marijuana use during the 1970s at the elementary school level, below seventh grade. Use by sixth grade or lower rose gradually from 0.6% for the class of 1975 (who were sixth graders in 1968-1969) to a peak of 4.3% for the class of 1984 (who were sixth graders in 1977-1978). Use began dropping thereafter, and for the twelfth-grade class of 1999 (who were sixth graders in 1992-1993) it was down to 1.1%. (The most up-to-date data from the 2001 eighth graders, which are slightly incomparable due to the inclusion of eventual dropouts among eighth graders, yield a prevalence estimate of 6.9% for these students when they were sixth graders in 1999.) The data from eighth graders clearly indicate that marijuana use among sixth graders increased some after 1991, but then leveled by the mid-1990s.

  Both the top and bottom panels of Figure 6-4 show the accelerating increase in marijuana lifetime prevalence of use that began after 1991 in grades 6 through 11 and in 1992 in grade 12. The recent upturn in the index of any illicit drug use (Figure 6-1) was due to the sharp increase in marijuana use (Figure 6-4), although the proportions using any illicit drug other than marijuana (Figure 6-2) rose modestly. The data from eighth graders suggest that the increase in marijuana use leveled off earlier in the lower grades (by 1995 in grade 6, by 1996 in grade 7) in what appears to be a cohort effect.

- Questions about grade of first use for ***inhalants*** (unadjusted for nitrites) were introduced in 1978. The retrospective trend curves (top panel of Figure 6-5) suggest that during the mid-1970s experience with inhalants decreased slightly for most grade levels and then began to rise. Initiation of use rose almost continually in the upper grade levels, peaking with the classes of 1989 and 1990. The twelfth-grade class of 1992 showed lower rates of initiation than its two predecessor classes at all grade levels, but the classes of 1993 and 1994 showed upward trends again, followed by a dip roughly in the classes of 1995 through 2001.

Among the eighth-grade respondents (lower panel of Figure 6-5), an upward trend began in 1992 for grades 7 and 8, before leveling around 1996, followed by a gradual decline.

- Retrospective data are available for the ***nitrite inhalants*** since 1980 (see Figure 6-6). These do not show the long-term increase observed for the overall inhalant category. To the contrary, they show a substantial decline. Many nitrite users fail to include their nitrite use when responding to general questions about inhalant use. However, since nitrite use has dropped to a very low level, respondents' omission of nitrites has had much less effect on the adjusted inhalants statistics (not graphed here) in recent years than it did when nitrite use was much more common.

- Lifetime prevalence of ***hallucinogen*** use (unadjusted for under-reporting of PCP) began declining among students at most grade levels in the mid-1970s (see Figure 6-7), and this gradual decline continued through the mid-1980s. Recent years have shown some fluctuations, with an increase in lifetime prevalence between roughly 1992 and 1997. The classes of 1998-2001 showed some decline in their later years in high school. Eighth graders showed some decline after 1996 in their retrospective data.

- Trend curves for the specific hallucinogen ***LSD*** (Figure 6-8) are similar in shape (though at lower rates, of course) to the ones just discussed. Unlike LSD, the lifetime prevalence rates for ***hallucinogens other than LSD*** (Figure 6-9) declined rather sharply from the mid-1970s through the late-1980s—particularly in the upper grades—before leveling. After 1991, use increased through 1997; the 1998 and 1999 classes of twelfth graders showed some decline but a leveling through the class of 2001.

- There are fewer trend data for ***PCP***, since retrospective questions about grade of first use for this drug were not added until 1980. However, some interesting results have emerged. A sharp downturn began around 1979 (see Figure 6-10), and use declined substantially in all grade levels in which there had been appreciable use, until 1987. Through 1993 or 1994 there was little further change in the overall lifetime prevalence rates, which remained very low. A brief period of increase in use then occurred, followed by another leveling and then a bit of a decline.

- ***Cocaine*** use at earlier grade levels is displayed in Figure 6-11. For the twelfth-grade classes, one clear contrast to the marijuana pattern is that more than half of cocaine initiation takes place in grades 10 through 12 (rather than earlier, as has been the case for marijuana in most years). Further, most of the increase in cocaine experience between 1976 and 1980 occurred in grades 11 and 12, not below. After 1980, experience with cocaine generally remained fairly level through 1986, after which use among eleventh and twelfth graders began to show a significant decline. (There seemed to be less of a decline in the lower grades.) Lifetime prevalence of use rates leveled after 1992 in the upper grades. But rates began to rise in grades 6, 7, and 8 after 1990 (see lower panel, Figure 6-11). In the upper grades, lifetime prevalence of use began to rise after 1994 or 1995 but has been declining in recent years. The increase that occurred in the early and mid-1990s suggests a cohort effect for cocaine use, following a long period of what could best be described as secular trends.

- Questions on grade of first use for ***crack*** were first asked of the class of 1987. The retrospective data show the lifetime prevalence of crack falling after 1986 at all grade levels in which there was any appreciable use (see Figure 6-12). Rates then leveled but in the mid-1990s began inching up. Rates reported by eighth graders showed a sharper rise in the seventh and eighth grades in the 1990s, beginning after 1992, before leveling in the late 1990s (see lower panel, Figure 6-12). Again, the pattern of change seems to be a cohort effect, with changes first occurring at earlier ages and then echoing in subsequent years up the age spectrum.

- The use of ***powdered cocaine*** clearly fell more sharply than did that of crack in the early decline phase (see Figure 6-13), again mostly in grades 11 and 12. Cocaine powder showed a sharper increase during the 1990s among twelfth graders, before leveling after 1998 and then declining some after 1999. Eighth-grade use also rose sharply in the 1990s and, again, stabilized and then declined in the more recent classes.

- Though somewhat difficult to discern in Figure 6-14, the ***heroin*** lifetime prevalence figures for grades 9 through 12 began declining in the mid-1970s, then leveled by 1979, and showed no evidence of reversal until the 1990s. After about 1991, lifetime prevalence of use increased at all grade levels above sixth grade. Beginning in 1996 or 1997, however, there was a leveling or decline in all grades for which data are available. Seventh and eighth graders were the first to show the most recent decline.

- The lifetime prevalence of use of ***narcotics other than heroin*** remained relatively flat at all grade levels from the mid-1970s through 1990, with the class of 1991 showing the first evidence of a decline when they reached the upper grades (see Figure 6-15). Rates then leveled briefly before showing some increase in the mid-1990s, particularly in the upper grades. The class of 1998 was the first to show a leveling for this class of drugs (when they passed through the various grade levels), as has been true for a number of the other drugs. There has been little change in the initiation of this class of drugs in recent years.

- The lifetime prevalence statistics for ***amphetamines*** peaked briefly for grades 9 through 12 during the mid-1970s (see Figure 6-16). However, they showed a sharp rise in the late 1970s at virtually all grade levels. As stated earlier, we believe that some, perhaps most, of this upturn was artifactual in the sense that the inappropriate inclusion of nonprescription amphetamines by the twelfth-grade respondents accounted for much of it. However, regardless of the cause, beginning in 1979 a clear upward secular trend was observed across all cohorts and grade levels. The unadjusted data from the class of 1983 gave the first indication of a reversal of this trend. The data from the classes of 1982 through 1992, based on an improved wording of the question, suggest that the use of amphetamines leveled around 1982 and thereafter fell appreciably in grades 9 through 12. The classes of 1993 and 1994 showed an upturn in use in the upper grade levels, and the recent surveys of eighth and tenth graders show that some upturn also occurred among them after 1992. The lower panel of Figure 6-16 shows an increase in grade 7 as well, which began after 1991 and lasted through 1996. Once again, the pattern of change in the 1990s is consistent with a cohort-related change.

- As shown in the graphs for the two subclasses of sedatives, barbiturates and methaqualone, the trend lines have been quite different at earlier grade levels as well as in twelfth grade (see Figures 6-17 and 6-18). Lifetime prevalence of ***barbiturate*** use fell sharply for the upper grade levels for all classes from 1974 or 1975 until the late 1970s; the lower grade levels showed some increase in the late 1970s (perhaps reflecting the advent of some look-alike, barbiturate-type drugs); and in the mid-1980s most grade levels resumed the decline. In the late 1980s there was a leveling of the rates, followed by signs of an upturn by the mid-1990s at all grade levels.

- During the mid-1970s, ***methaqualone*** use started to fall off at about the same time as did barbiturate use in nearly all grade levels, but it dropped rather little and then flattened (see Figure 6-18). Between 1978 and 1981, there was a moderate resurgence in use at all grade levels; but after 1982 there was a sharp decline at all grade levels to near zero by the early 1990s. A very slight increase in initiation occurred in the mid-1990s.

- Lifetime prevalence of ***tranquilizer*** use (Figure 6-19) also began to decline at all grade levels in the mid-1970s. It is noteworthy that, as for sedatives, the overall decline in tranquilizer use has been considerably greater in the upper grade levels than in the lower ones. Overall, it would appear that the tranquilizer trend lines have been following a similar course to those of barbiturates. So far, the curves are different only in that tranquilizer use continued a steady decline among eleventh and twelfth graders after 1977 (at least through the class of 1990), while the barbiturate use decline was interrupted for awhile in the early 1980s. Since 1992, there has been a slight increase in lifetime prevalence of use in grades 8 and above, but the classes of 2000 and 2001 reported slightly decreased initiation rates. The retrospective data reported by eighth graders show mostly level lifetime prevalences for the different grades since 1996.

- The curves for lifetime prevalence of ***alcohol use*** at grades 11 and 12 (Figure 6-20) are very flat between the early 1970s and late 1980s, reflecting little change in lifetime prevalence of use over more than a decade. More recent classes (1989-1993) showed slight declines, which ended with the class of 1993. By way of contrast, in the retrospective data reported by seniors, the lifetime prevalence curves for seventh through tenth grade showed slight upward slopes in the early 1970s and an even sharper upward trend in the mid-1980s. The latter trend indicates that, compared to the earlier cohorts (prior to the class of 1978), those later classes initiated use at slightly earlier ages on average. Thus, while 27% of the class of 1975 had first used alcohol in eighth grade or earlier, 36% in the class of 1993 had done so. Females accounted for most of the change; 42% of females in the class of 1975 had first used alcohol prior to tenth grade, compared to 53% in the class of 1993. Because all of the results from the class of 1994 onward are based on the revised questions about alcohol use, these data are not strictly comparable to the earlier trend data. The revised data from the classes of 1993 through 2001, which qualify the alcohol use question with the phrase "more than just a few sips," show rather little further change. The lower panel of Figure 6-20 shows a gradual, steady decline in lifetime prevalence of use from the late 1980s through 2001 in grades 4 through 8.

  Beginning in 1986, we added questions asking twelfth graders when did they first "drink enough to feel drunk or very high." Figure 6-21, which gives trends in the lifetime prevalence of having ***been drunk***, shows fairly similar curves to those for lifetime prevalence of alcohol use. The classes of 1990 through 1993 showed modest declines in this behavior at all grade levels above sixth grade for a few years, before leveling. Based on the answers from eighth graders, there has been some gradual decline in lifetime incidence of drunkenness in the lower grades throughout most of the 1990s and into the early 2000s, consistent with their gradually increasing rate of abstention mentioned previously.

- Questions asking seniors "when did you smoke your first cigarette?" were added in 1986. (A question about daily smoking was included for a much longer time.) Figure 6-22 shows that for the class of 1986 the rate of ***cigarette smoking*** initiation was quite high by grade 6 (i.e., in 1980); over 20% had used cigarettes by sixth grade.[51] In subsequent classes, this measure fell gradually; 15% of the class of 2001 reported having initiated cigarette smoking by the end of sixth grade, that is, by 1995.

  Substantial additional initiation occurs in grades 7 and 8, as can be seen in the wide gap between the bottom two lines in the upper panel of Figure 6-22. Over 40% of the class of 1986 had smoked a cigarette by the end of eighth grade; and 38% of the class of 2001 had initiated use by then (i.e., by 1997). Initiation rates declined very gradually in the classes of 1986 through 1992 when students were at each grade level, from grade 6 onward. The classes of 1994 through 1999 showed some increase in initiation rates when these students were in grades 10 through 12, but only the classes of 1997 through 1999 reflected some increase in the lower grades. This altered pattern is suggestive of a change in the underlying phenomenon, from the traditional cohort effect for cigarettes to some secular trending, as well. The data gathered from eighth-grade respondents also show some increase in lifetime prevalence from when they were first surveyed in 1991, through 1996; but, again, this increase was not observable when they were at lower grade levels—in fact, there was some falloff in initiation rates in the lower grades in the late 1980s and early 1990s.

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[51] Because of the predominance of cohort effects in the trends in cigarette use, we discuss the findings here mostly in terms of graduating classes instead of calendar years.

- Figure 6-23 presents the other smoking measure contained in the study, one included since its inception in 1975: lifetime prevalence of cigarette smoking "on a daily basis." It shows that lifetime initiation rates for ***daily smoking*** began to peak at the lower grade levels in the early to mid-1970s. This peaking did not become apparent among high school seniors until some years later. In essence, these changes largely reflect cohort effects—patterns of change that emerge consistently across different class cohorts as they progress in age. When differences in smoking at early ages are observed between cohorts, those differences tend to endure in later life, most likely due to the highly addictive nature of nicotine.

The classes of 1982 and 1983 showed some leveling of the previous decline in daily smoking, but the classes of 1984 through 1986 resumed the decline while the students were in earlier grade levels. The data from the classes of 1987 and 1988 showed another pause in the decline. As we have said, from the class of 1975 through the class of 1992, the predominant pattern of change observed was that of a cohort effect.[52] Each "bulge" in the prevalence of use rate was echoed at higher grade levels as those class cohorts passed through the upper grades. After 1992, however, a somewhat different pattern emerged—one more akin to a secular trend—in which all age groups moved in parallel during the same historical period. Figure 6-23 shows that all grade levels above sixth grade displayed a sharp increase in initiation rates from 1991 or 1992 through 1995 or 1996. The lower grades seem to be exhibiting the resumption of a cohort-effect pattern starting with the eighth-grade class of 1997. It should be noted that the presence of a secular trend effect does not necessarily negate the presence of a cohort effect; the two can co-occur. The class of 1998 was the first to show a leveling, when they were in the lower grades, and then a decline by the time they reached the upper grades. In the past few years there appears to be somewhat of a downward secular trend observed in all grades.

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[52] This interpretation has been documented through multivariate analyses designed to separate and quantify secular trends, age effects, and cohort effects. See O'Malley, P. M., Bachman, J. G., & Johnston, L. D. (1988). Period, age, and cohort effects on substance use among young Americans: A decade of change, 1976-1986. *American Journal of Public Health, 78*, 1315-1321.

- ***Smokeless tobacco*** use (Figure 6-24) was first asked of seniors in the class of 1986. The questions about prevalence of smokeless tobacco use were dropped from the 1990 and 1991 surveys of twelfth graders but reinstated in 1992. The 1986-1989 survey questions were located near the end of one form; the questions in 1992 were located in a different form and placed early in the form. As a result of the changed placement of the questions, the estimates based on the earlier version and the later version are not strictly comparable; therefore, it may be misleading to connect the two trend lines. One thing that is clear from both sets of trend lines, however, is that smokeless tobacco use also shows strong evidence of enduring cohort differences—or "cohort effects."

  There appears to have been a rise in smokeless tobacco use in classes prior to the class of 1986, one that began to reverse in the twelfth-grade classes following 1986 (see Figure 6-24). Decline seemed to continue in the classes of 1992 through 2001 (and quite possibly it was also present in the two missing classes—1990 and 1991—although we cannot say for certain). The lower panel in Figure 6-24 generally shows a pattern of continuing decline at the lower grade levels in more recent years, although there was a pause in the decline (from 1993 to 1996) just as there was among cohorts of twelfth graders in those years. The data from eighth graders also show a pause in the longer-term decline from 1993 through 1996, suggesting that an upward secular trend may have been occurring during that period, parallel to the one for cigarettes.

- Information on grade of first use for ***steroids*** was not gathered prior to 1989; therefore more limited trend information is available (Figure 6-25). However, it does show some of the pattern characteristics of cohort change predominating over secular trends. There was not a great deal of variation in the initiation of steroid use for some time, although there did seem to be some decline in initiation between the classes of 1989 and 1991, followed by a leveling off. Only a small amount of variation in initiation occurred among the eighth and tenth grades, also. The data from both eighth- and twelfth-grade students, however, show some increase in use in the more recent classes—an increase that looks more like a secular trend than a cohort effect. For the 2001 eighth grade class, initiation appeared to level off.

TABLE 6-1

Incidence of Use for Various Drugs, by Grade Eighth Graders, 2001

(Entries are percentages)

Grade in which drug was first used:	Marijuana	Inhalants	Hallucinogens	LSD	Cocaine	Crack	Coke Powder	Heroin	Amphetamines	Tranquilizers	Alcohol	Been Drunk	Cigarettes	Cigarettes (Daily)[a]	Smokeless Tobacco	Steroids
4th (or below)	1.2	3.7	0.3	0.2	0.3	0.2	0.2	0.2	0.4	0.4	8.2	1.3	8.6	0.6	2.7	0.2
5th	1.7	3.0	0.4	0.3	0.3	0.2	0.2	0.2	0.7	0.3	6.1	1.5	7.7	1.0	2.0	0.2
6th	4.0	3.8	0.6	0.5	0.7	0.5	0.6	0.4	1.6	0.7	12.1	4.2	8.5	1.7	2.4	0.6
7th	7.3	4.0	1.3	1.2	1.5	1.0	1.0	0.4	3.7	1.5	14.8	8.6	8.4	2.8	2.8	1.0
8th	6.3	2.6	1.4	1.2	1.6	1.1	1.3	0.5	3.8	1.8	9.3	7.8	3.4	2.1	1.8	0.8
Never used	79.6	82.9	96.1	96.6	95.7	97.0	96.7	98.3	89.8	95.3	49.5	76.6	63.4	91.8	88.3	97.2

NOTES: All drugs were asked about in all four forms except for the following: hallucinogens, LSD, heroin, amphetamines, tranquilizers, and smokeless tobacco, which were asked about in two forms only. The approximate N for all forms was 16,200.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data based on the percentage of regular smokers (ever).

TABLE 6-2

Incidence of Use for Various Drugs, by Grade Tenth Graders, 2001

(Entries are percentages)

Grade in which drug was first used:	Marijuana	Inhalants	Hallucinogens	LSD	Cocaine	Crack	Coke Powder	Heroin	Amphetamines	Tranquilizers	Alcohol	Been Drunk	Cigarettes	Cigarettes (Daily)[a]	Smokeless Tobacco	Steroids
4th (or below)	0.9	2.0	0.1	0.1	0.1	0.1	0.1	0.0	0.2	0.2	4.7	0.9	6.0	0.4	2.3	0.1
5th	1.1	1.5	0.1	0.1	0.1	0.0	0.0	0.1	0.2	0.0	3.2	0.8	6.3	0.5	1.5	0.1
6th	3.0	2.3	0.3	0.2	0.2	0.2	0.1	0.1	0.5	0.3	6.7	2.7	9.0	1.5	2.3	0.1
7th	6.1	3.1	0.9	0.7	0.4	0.2	0.5	0.1	1.7	0.8	12.1	6.3	10.4	3.0	2.3	0.4
8th	9.7	2.7	1.7	1.5	1.1	0.6	1.0	0.5	2.9	1.3	18.1	11.1	9.8	3.5	3.7	0.8
9th	12.3	2.3	2.9	2.3	2.3	1.2	1.9	0.4	6.8	3.3	18.7	18.0	8.0	4.5	5.0	1.3
10th	7.0	1.3	1.7	1.4	1.5	0.7	1.3	0.4	3.7	2.2	6.6	8.4	3.3	2.8	2.4	0.8
Never used	59.9	84.8	92.2	93.7	94.3	96.9	95.0	98.3	84.0	91.9	29.9	51.8	47.2	83.7	80.5	96.6

NOTES: All drugs were asked about in all four forms except for the following: hallucinogens, LSD, heroin, amphetamines, tranquilizers, and smokeless tobacco, which were asked about in two forms only. The approximate N for all forms was 14,000.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data based on the percentage of regular smokers (ever).

TABLE 6-3

Incidence of Use for Various Drugs, by Grade Twelfth Graders, 2001

(Entries are percentages)

Grade in which drug was first used:	Any Illicit Drug	Any Illicit Drug Other Than Marijuana	Marijuana	Inhalants[a]	Amyl/Butyl Nitrites	Hallucinogens[a]	LSD	Hallucinogens Other Than LSD	PCP	Cocaine	Crack	Other Forms of Cocaine	Heroin	Other Narcotics	Amphetamines[b]	Barbiturates	Methaqualone	Tranquilizers	Alcohol	Been Drunk	Cigarettes	Cigarettes (Daily)[c]	Smokeless Tobacco	Steroids
6th (or below)	2.9	0.9	2.4	2.0	0.3	0.3	0.2	0.2	0.3	0.4	0.3	0.3	0.2	0.3	0.9	0.6	0.2	0.5	8.6	2.9	15.1	1.9	3.2	0.4
7–8th	15.5	4.6	14.0	4.2	0.3	1.8	1.4	0.8	0.5	0.9	0.4	0.9	0.2	0.9	2.2	1.1	0.1	0.8	20.3	13.7	22.5	5.4	5.6	0.3
9th	12.0	6.4	10.9	2.7	0.4	2.8	2.3	1.5	0.8	1.5	0.5	1.5	0.4	1.9	3.5	2.4	0.4	1.6	19.3	17.1	10.1	5.6	3.3	0.7
10th	10.5	6.2	9.7	1.6	0.2	3.3	3.0	1.9	0.6	1.7	1.0	1.6	0.5	2.3	3.1	2.3	0.3	2.0	14.4	12.6	6.3	4.6	3.5	0.6
11th	8.2	5.9	7.6	0.9	0.5	2.9	2.4	1.5	0.6	2.0	0.9	1.8	0.2	2.7	3.0	1.4	0.1	2.4	11.1	12.1	4.7	4.0	2.6	1.1
12th	4.8	4.5	4.4	1.6	0.2	1.6	1.5	1.0	0.6	1.7	0.6	1.3	0.2	1.7	3.5	1.0	0.2	1.8	5.9	5.4	2.4	1.7	1.5	0.6
Never used	46.1	71.5	51.0	87.0	98.1	87.2	89.1	93.0	96.5	91.8	96.3	92.6	98.2	90.1	83.8	91.3	98.9	90.8	20.3	36.1	39.0	76.8	80.3	96.3

NOTES: Percentages are based on two of the six forms (N = approximately 4,200) except for cocaine, crack, and cigarettes, for which percentages are based on three of the six forms (N = approximately 6,400), and inhalants, nitrites, PCP, other forms of cocaine, and steroids, for which percentages are based on one of the six forms (N = approximately 2,100).

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Unadjusted for known underreporting of certain drugs. See text for details.

[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[c] Data based on the percentage of regular smokers (ever).

TABLE 6-4

Incidence of Use for Various Drugs: A Comparison of Responses from Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

Grade level of respondents:	Marijuana	Inhalants[a]	Hallucinogens[a]	LSD	Cocaine	Crack	Other Cocaine	Heroin	Amphetamines[b]	Tranquilizers	Alcohol	Been Drunk	Cigarettes	Cigarettes (Daily)[c]	Smokeless Tobacco	Steroids
	Percentage who used by end of 6th grade															
8th	6.8	10.5	1.3	1.0	1.3	0.8	1.0	0.8	2.8	1.4	26.4	7.0	24.8	3.4	7.1	1.0
10th	5.0	5.8	0.6	0.4	0.4	0.3	0.3	0.2	0.9	0.5	14.7	4.4	21.3	2.4	6.1	0.3
12th	2.4	2.0	0.3	0.2	0.4	0.3	0.3	0.2	0.9	0.5	8.6	2.9	15.1	1.9	3.2	0.4
	Percentage who used by end of 8th grade															
8th	20.4	17.1	4.0	3.4	4.3	3.0	3.3	1.7	10.2	4.7	50.5	23.4	36.6	8.2	11.7	2.8
10th	20.8	11.6	3.2	2.6	1.9	1.1	1.7	0.8	5.5	2.6	44.8	21.7	41.5	9.0	12.1	1.4
12th	16.3	6.2	2.1	1.7	1.3	0.7	1.2	0.4	3.1	1.4	28.9	16.6	37.6	7.3	8.8	0.7
	Percentage who used by end of 10th grade															
10th	40.1	15.2	7.8	6.3	5.7	3.1	5.0	1.7	16.0	8.1	70.1	48.2	52.8	16.3	19.5	3.4
12th	36.9	10.5	8.2	7.0	4.5	2.2	4.3	1.4	9.7	5.0	62.6	46.4	53.9	17.5	15.6	2.0

NOTES: For 8th and 10th graders, all drugs were asked about in all four forms except for the following: hallucinogens, LSD, heroin, amphetamines, tranquilizers, and smokeless tobacco, which were asked about in two forms only. The approximate N for all forms for 8th graders was 16,200 and for 10th graders was 14,000. For 12th graders, percentages are based on two of the six forms (N = approximately 4,200) except for cocaine, crack, and cigarettes, for which percentages are based on three of the six forms (N = approximately 6,400), and inhalants, nitrites, PCP, other forms of cocaine, and steroids, for which percentages are based on one of the six forms (N = approximately 2,100).

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Unadjusted for underreporting of certain drugs. See text for details.

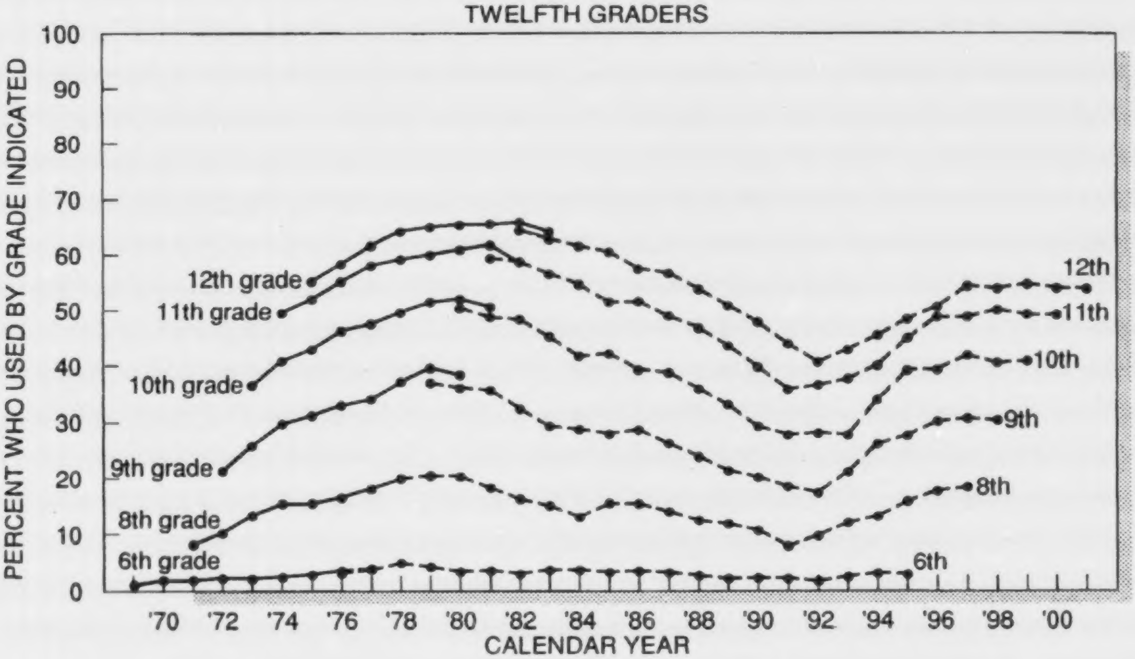
[b] Based on the data from the revised question, which attempts to exclude the inappropriate reporting of nonprescription amphetamines.

[c] Data based on the percentage of regular smokers (ever).

FIGURE 6-1

Use of Any Illicit Drug: Trends in Lifetime Prevalence for Earlier Grade Levels

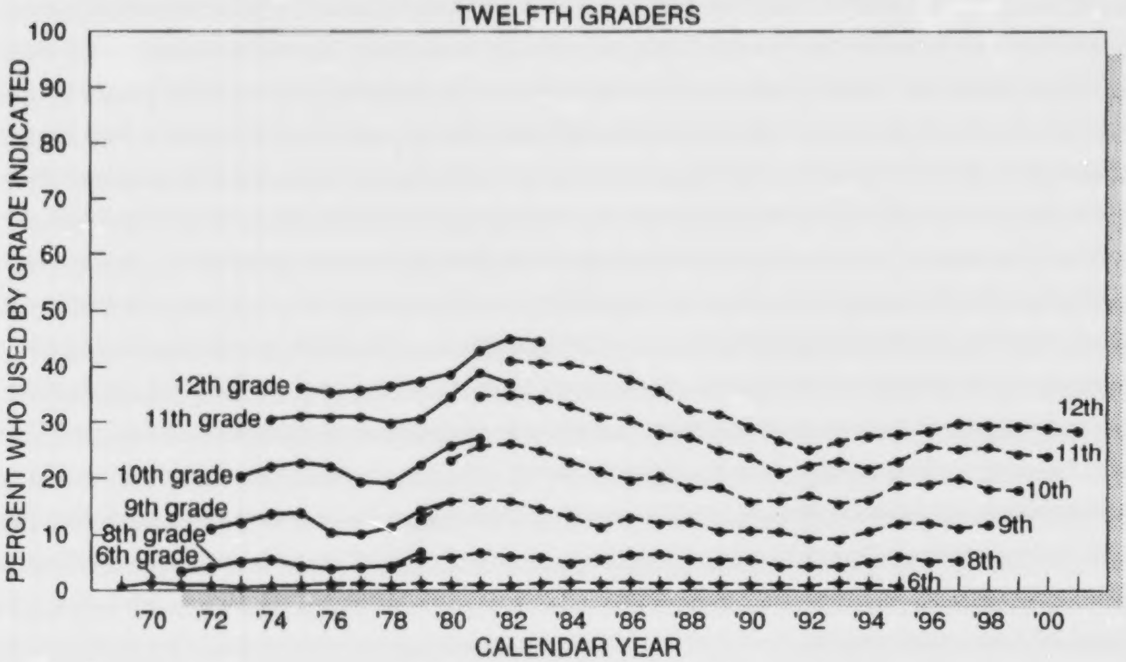
Based on Retrospective Reports from Twelfth Graders



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 6-2

Use of Any Illicit Drug Other than Marijuana:
Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders



NOTE: The dotted lines connect percentages which result if non-prescription stimulants are excluded.

FIGURE 6-3

Use of Any Illicit Drug Other than Marijuana or Amphetamines:
Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

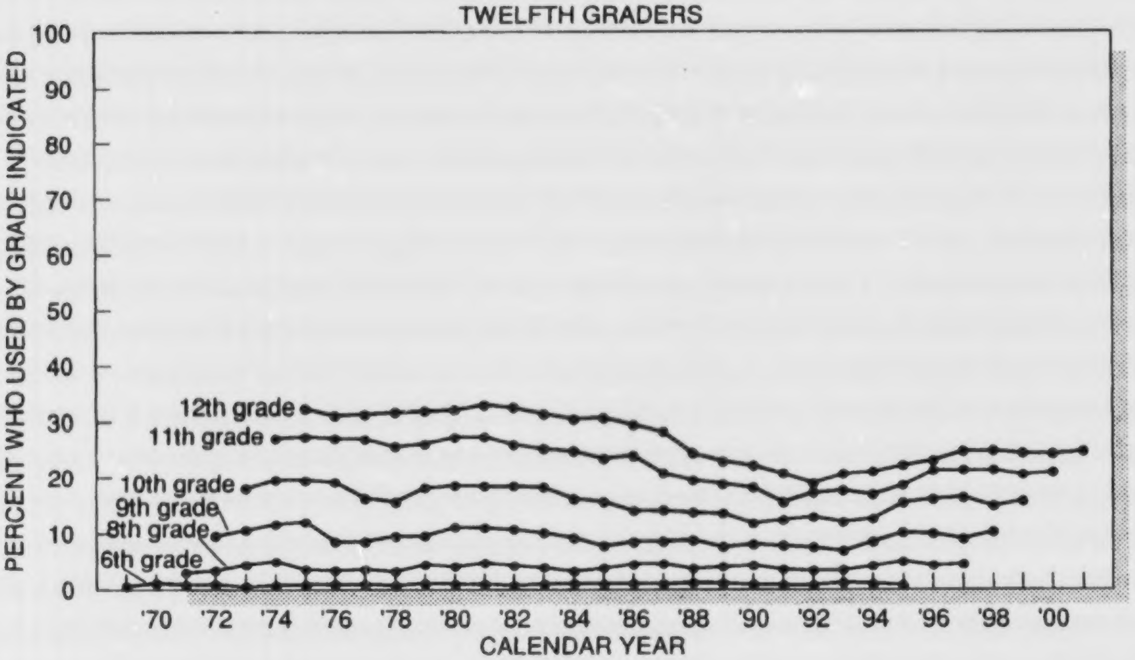


FIGURE 6-4

Marijuana: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth and Eighth Graders

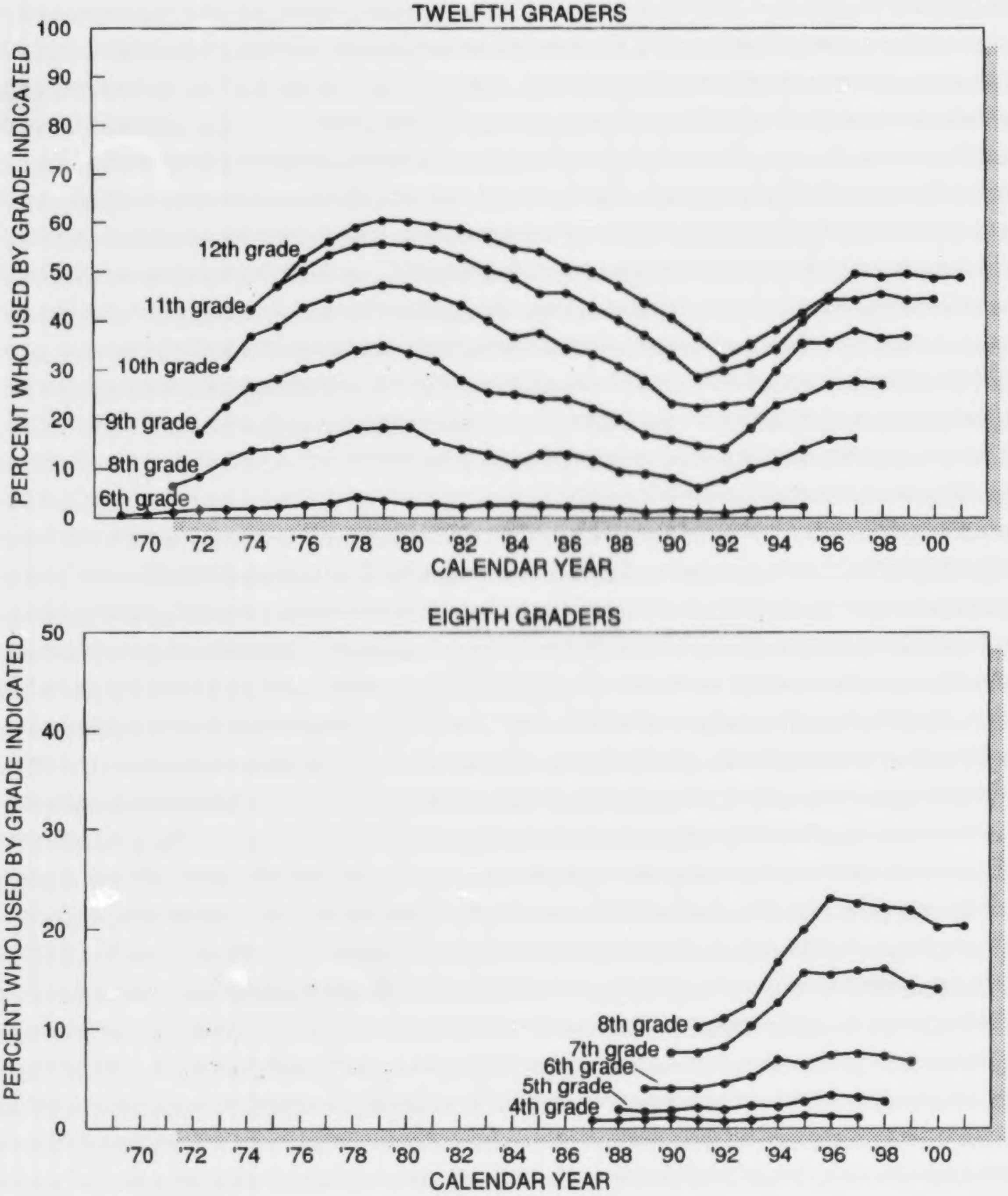


FIGURE 6-5

Inhalants: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders

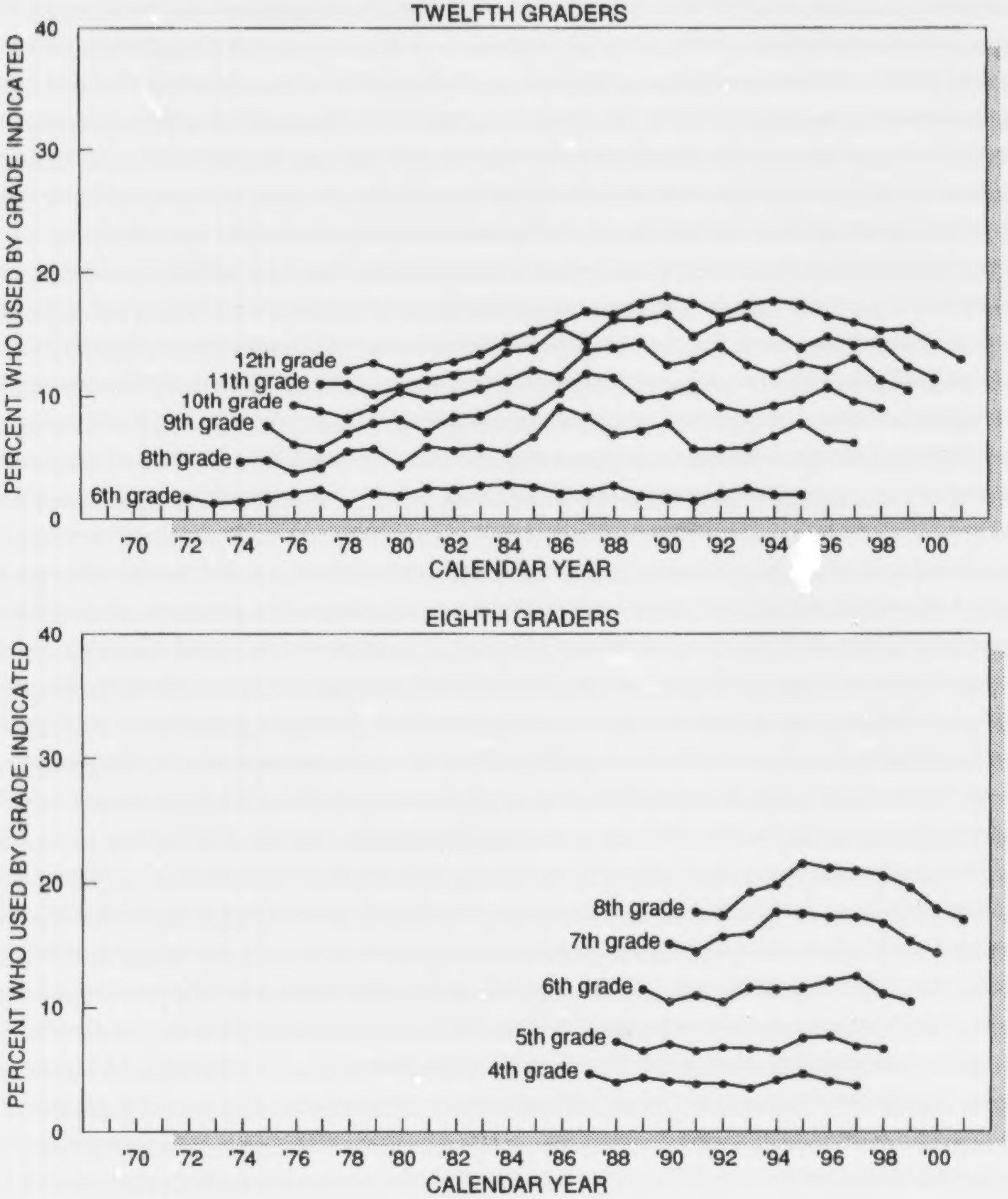


FIGURE 6-6

Nitrites: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

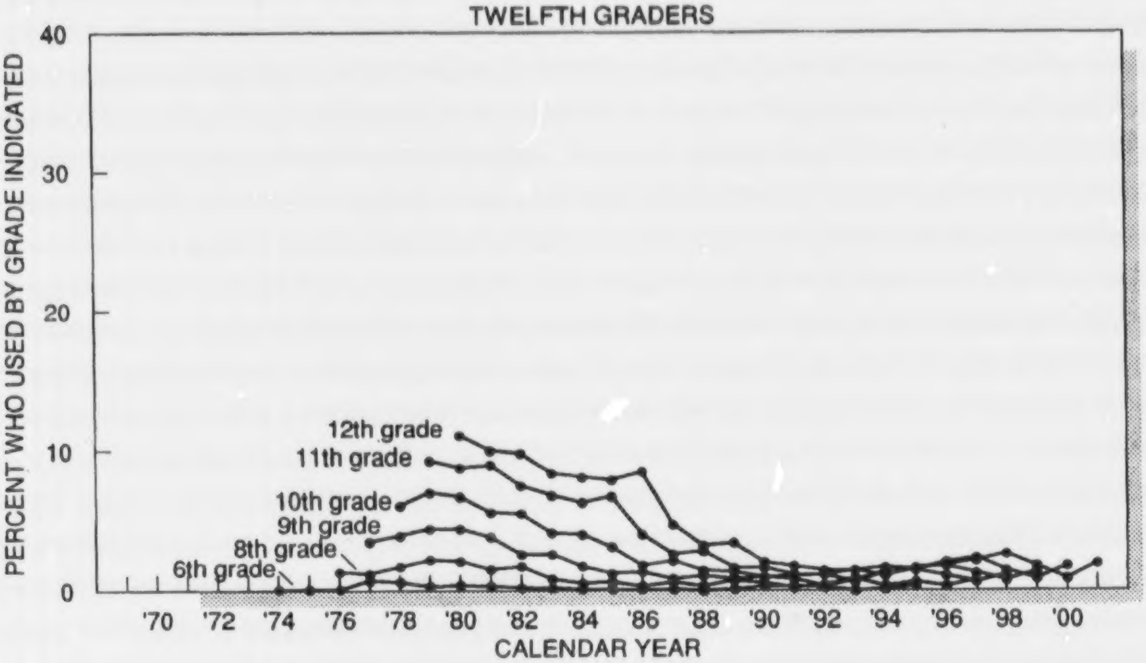
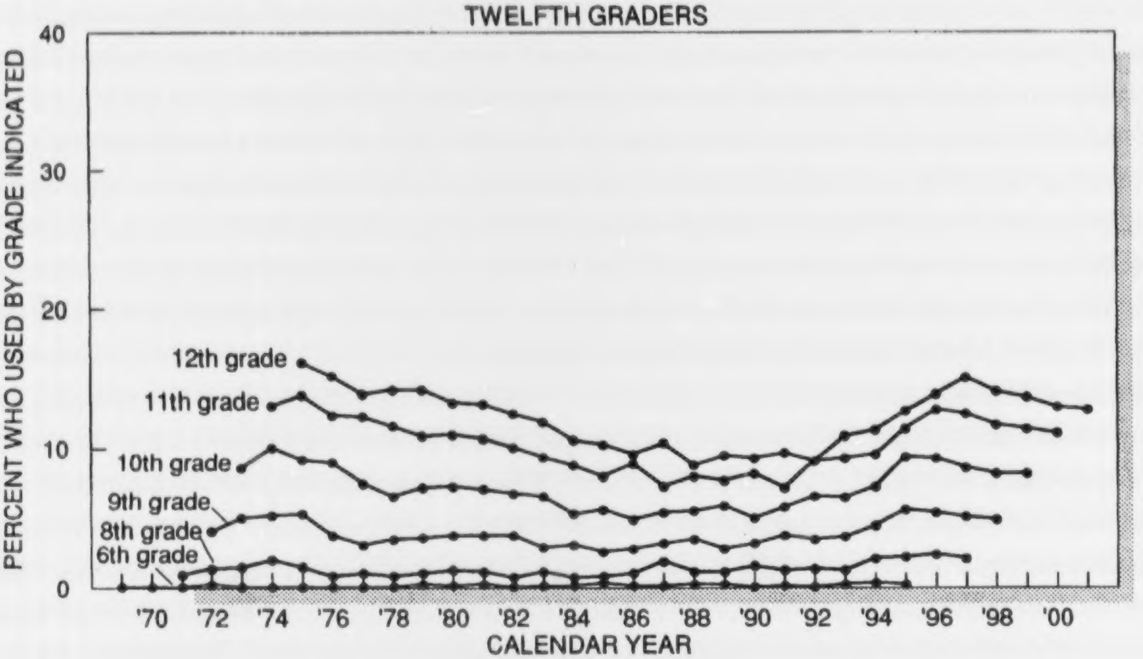
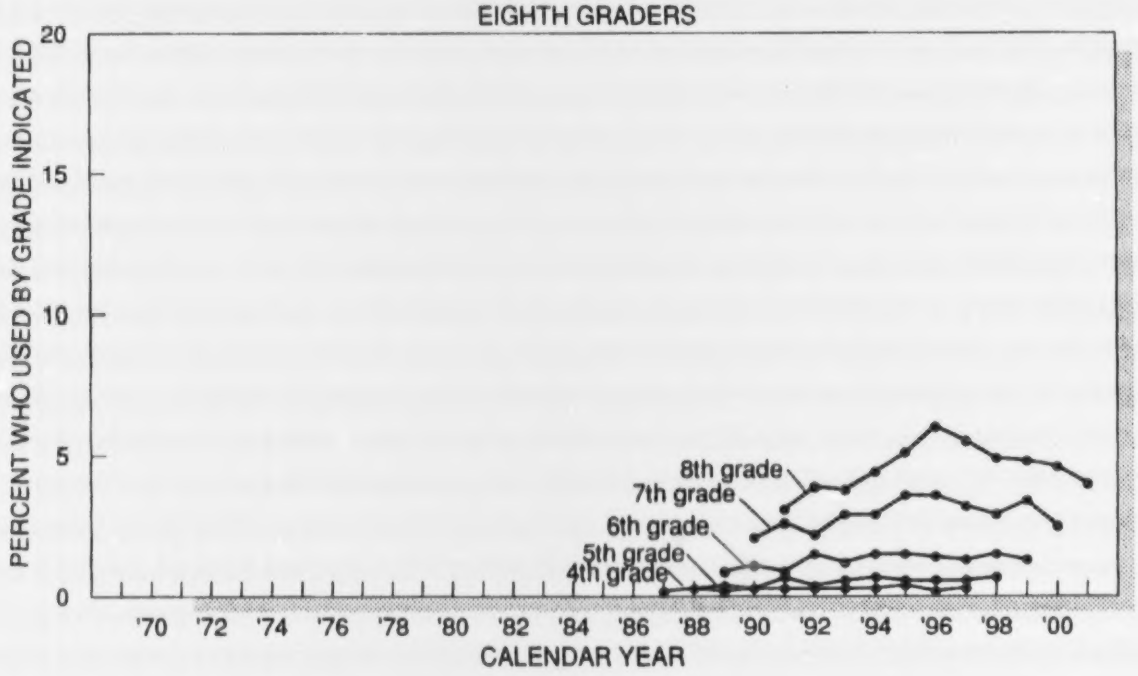


FIGURE 6-7

Hallucinogens: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders

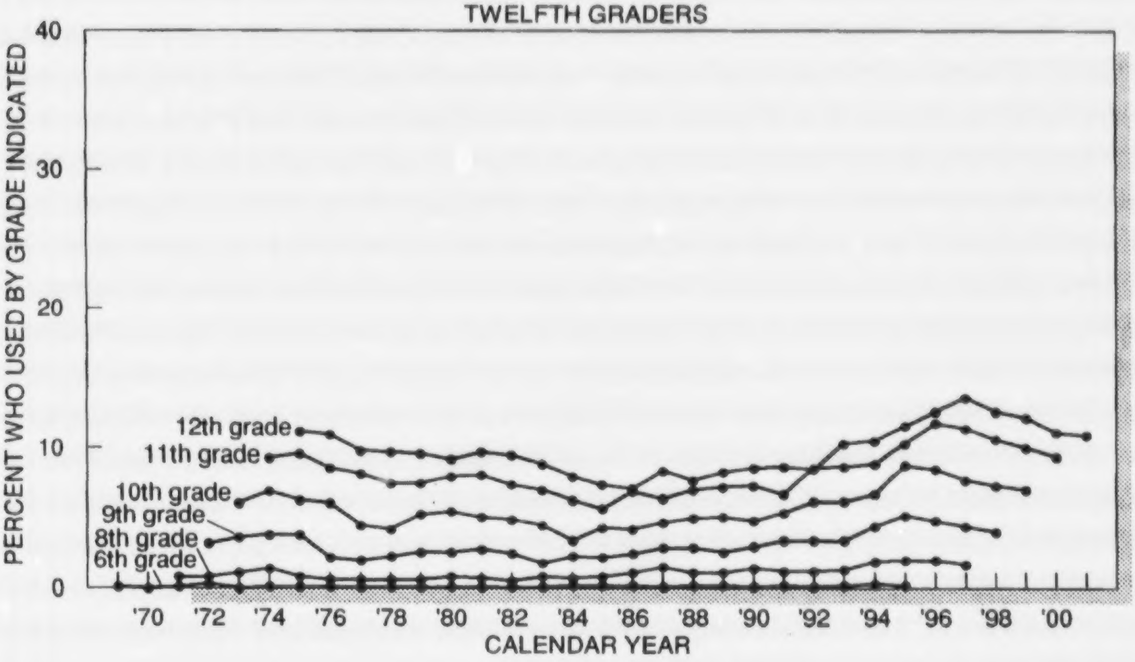




NOTE: Hallucinogens **unadjusted** for any underreporting of PCP are graphed here.

FIGURE 6-8

LSD: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders



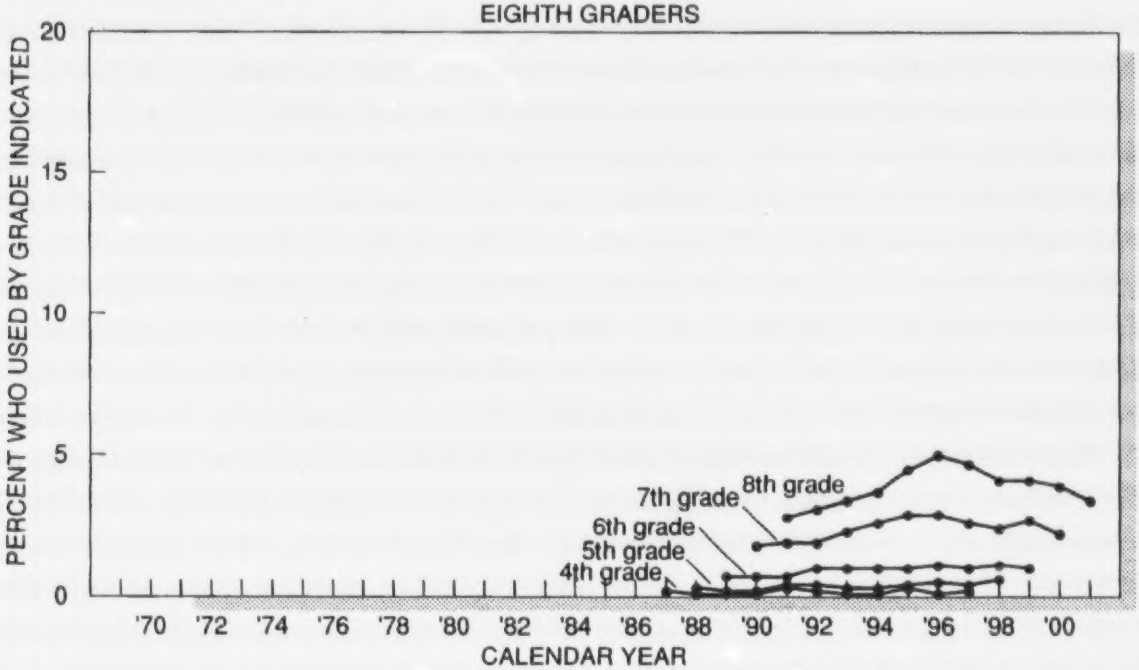


FIGURE 6-9

Hallucinogens Other Than LSD: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth Graders

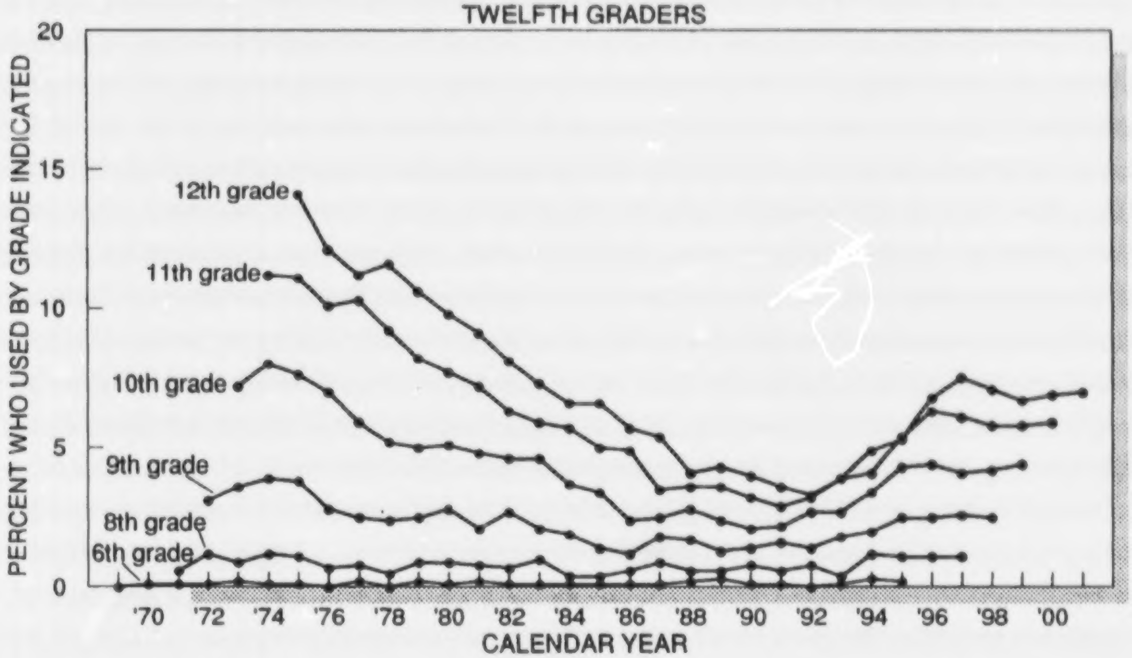


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FIGURE 6-10

PCP: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

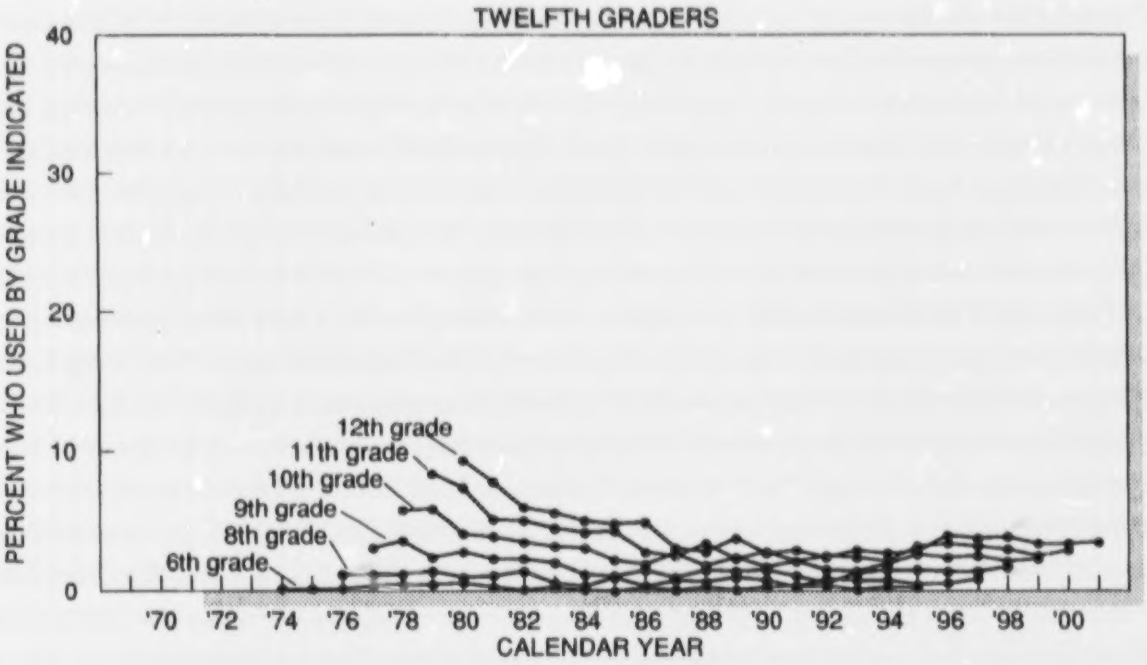


FIGURE 6-11

Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders

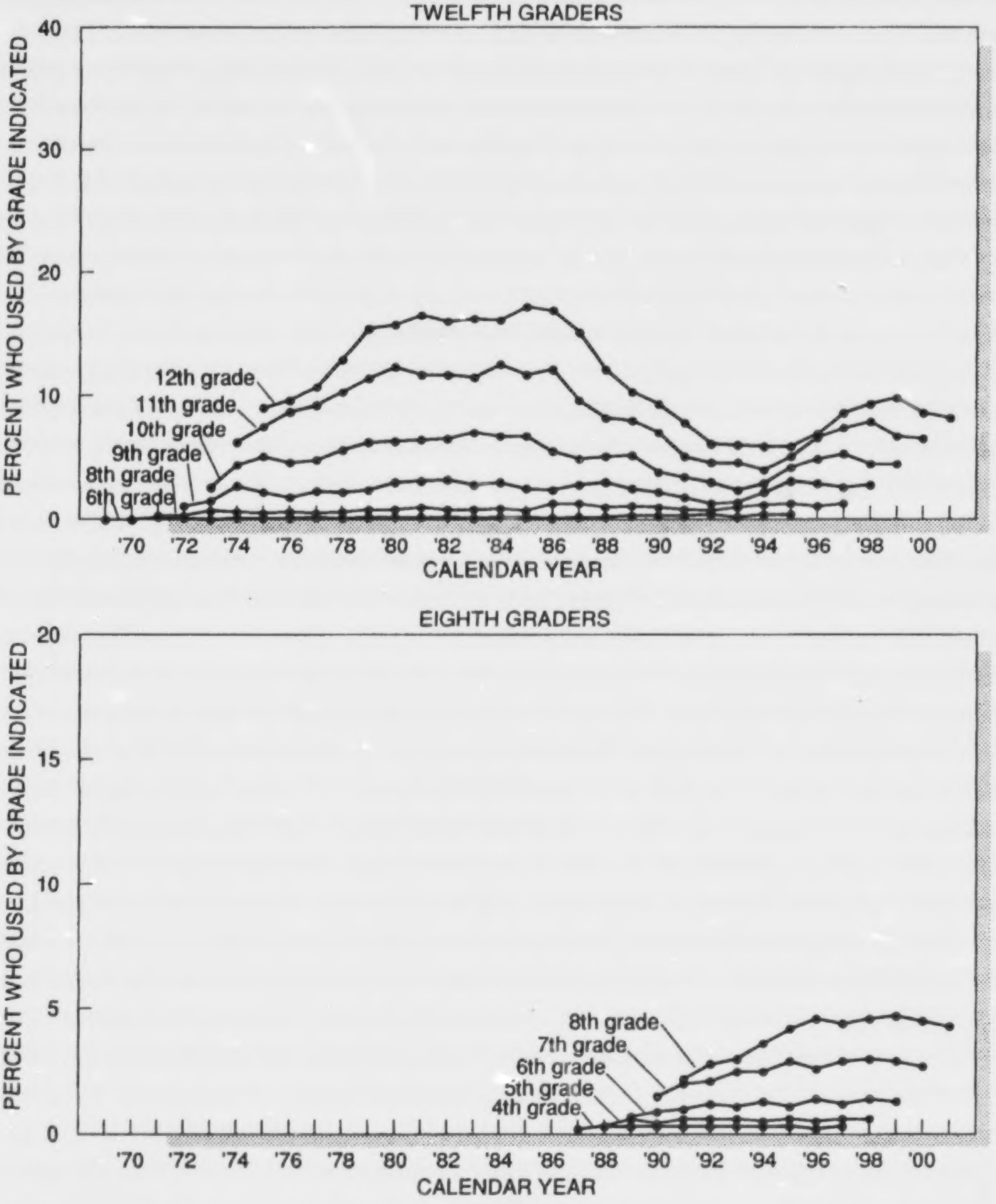
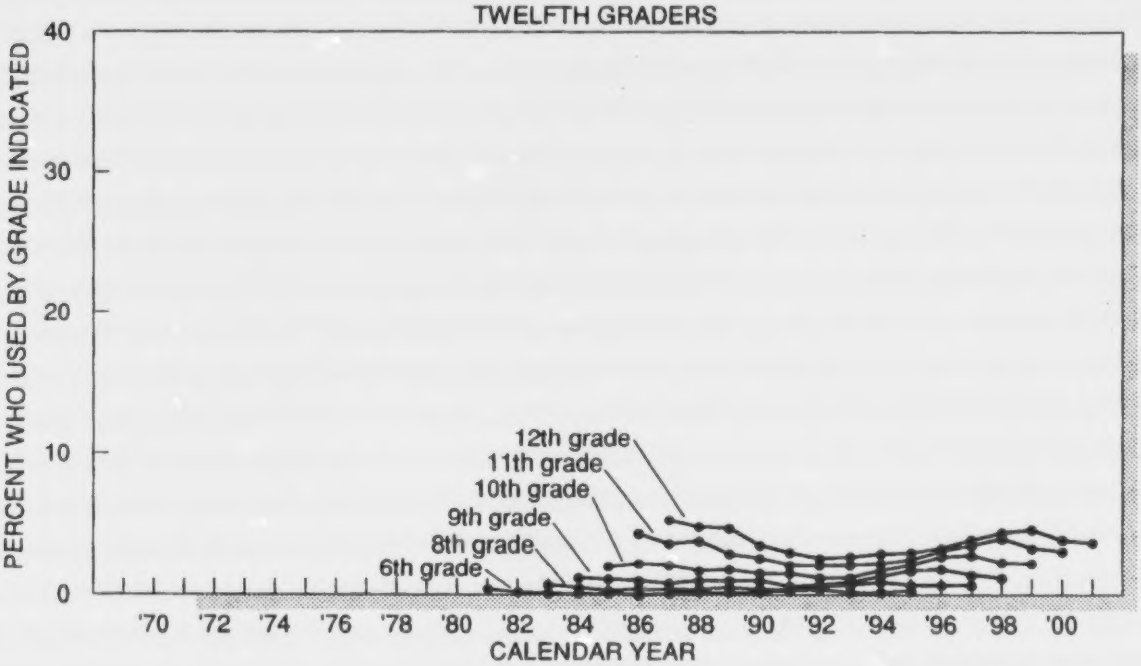


FIGURE 6-12

Crack Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth and Eighth Graders



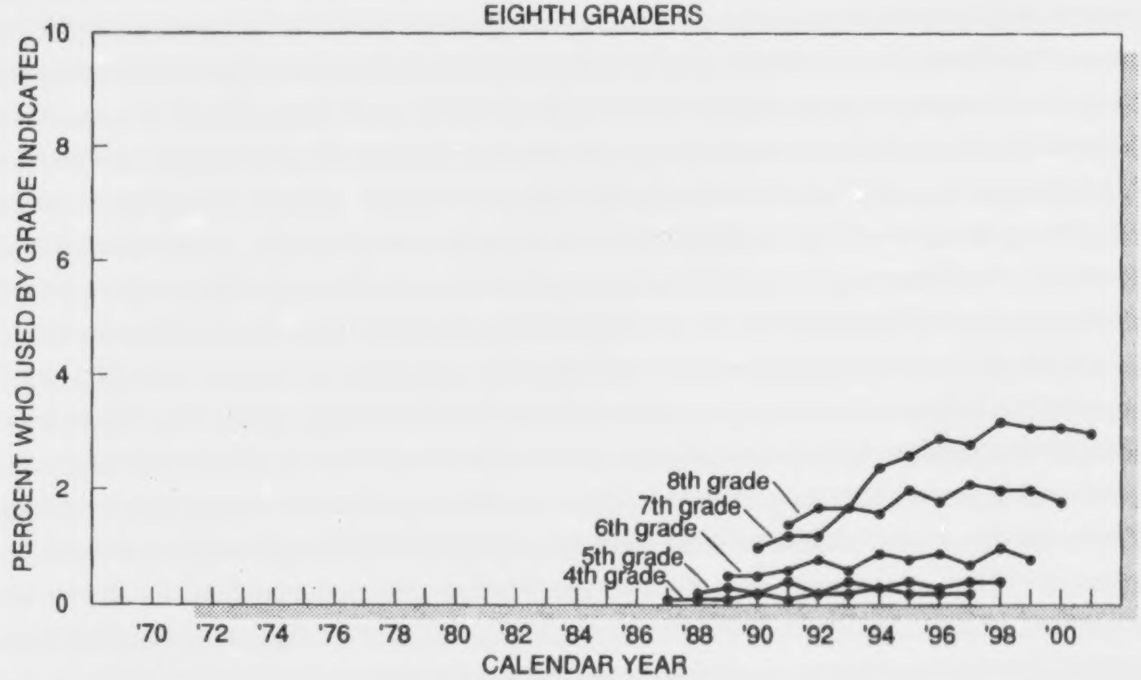
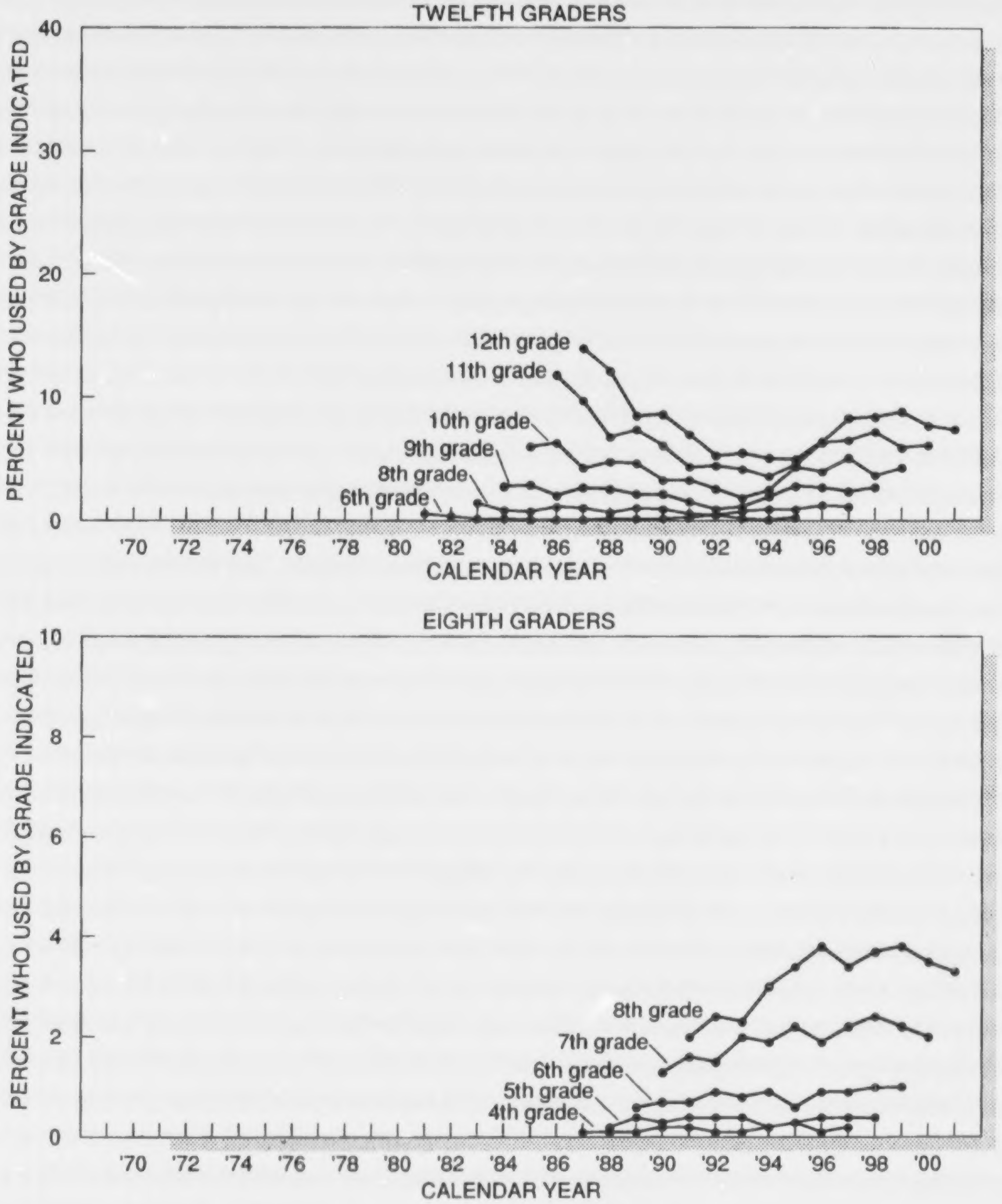


FIGURE 6-13

Other Forms of Cocaine: Trends in Lifetime Prevalence for Earlier Grade Levels

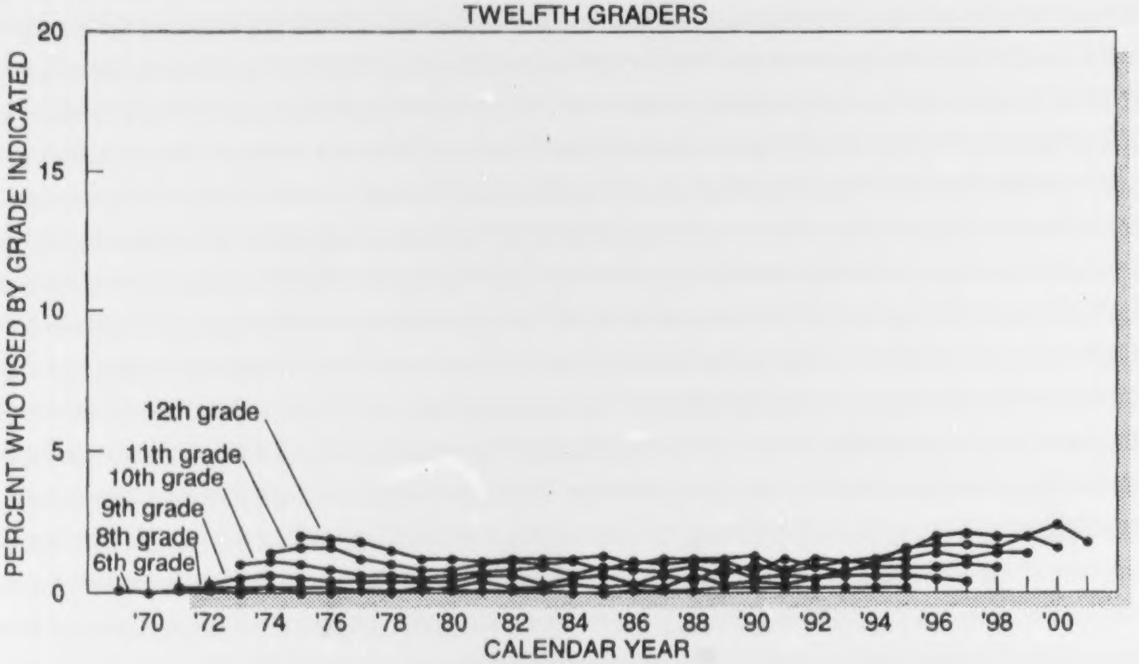
Based on Retrospective Reports from Twelfth and Eighth Graders



NOTE: The eighth grade question asked about cocaine in powder form.

FIGURE 6-14

Heroin: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders



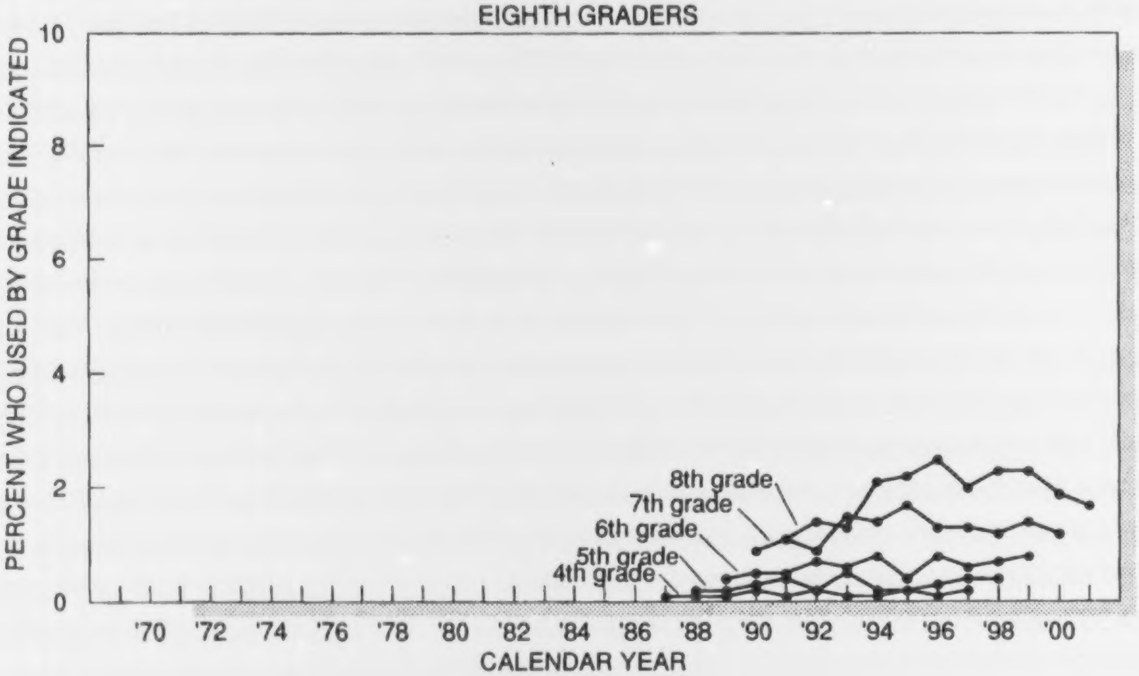


FIGURE 6-15

Narcotics Other than Heroin: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth Graders

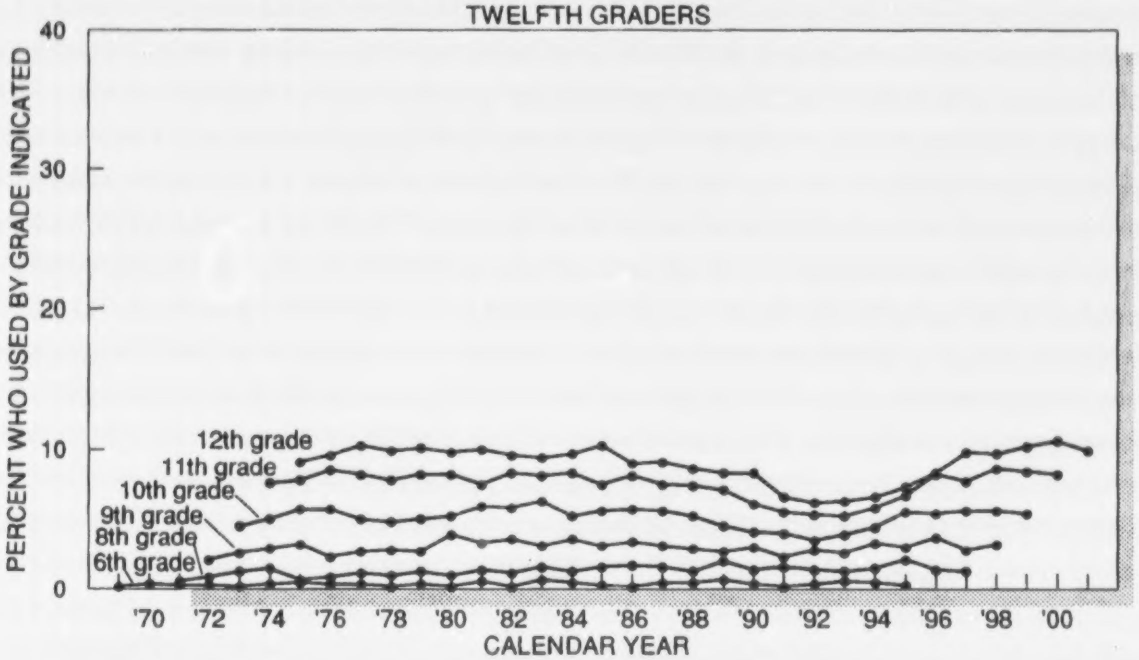
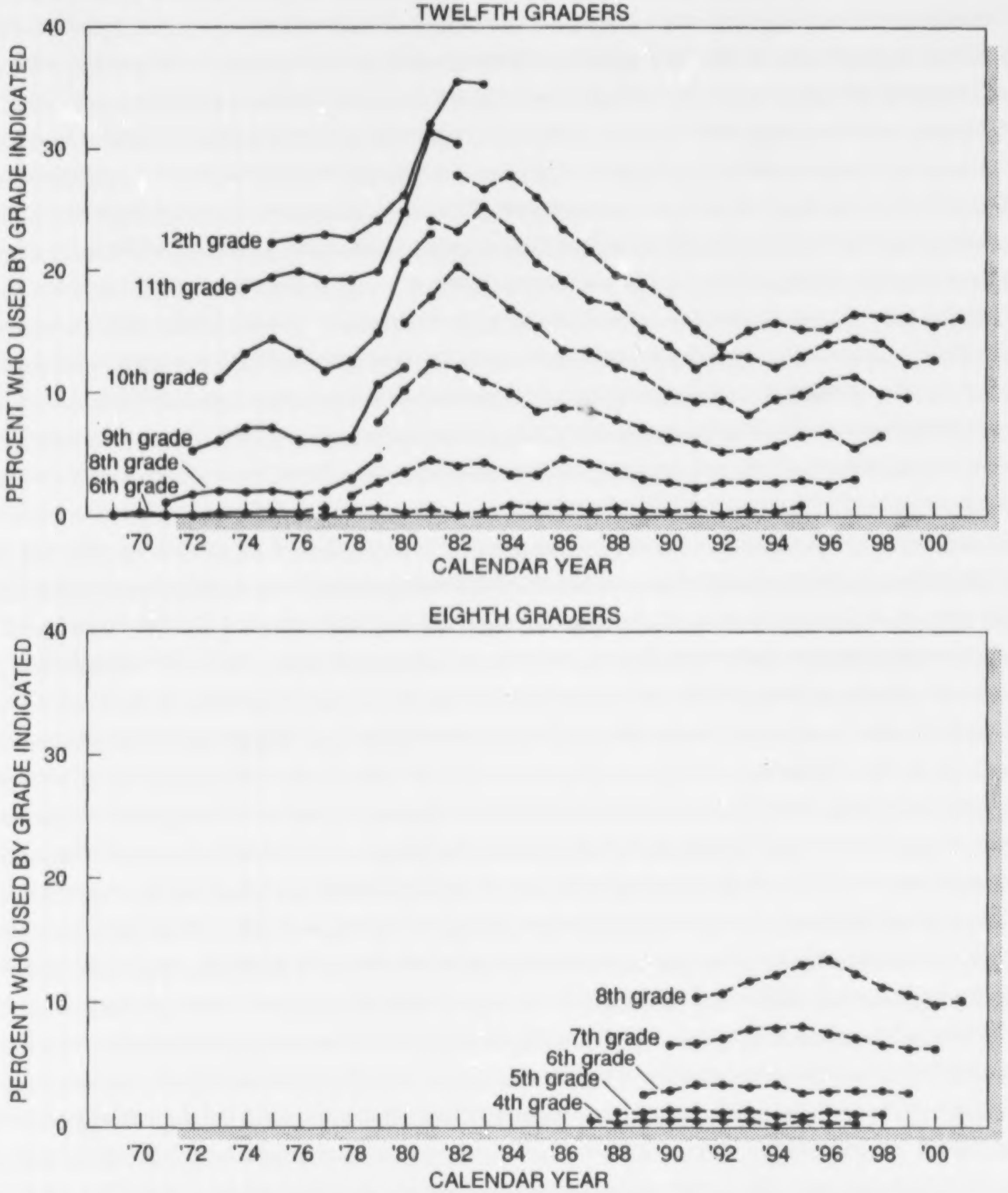


FIGURE 6-16

Amphetamines: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders



NOTE: The dotted lines connect percentages which result if nonprescription stimulants are excluded.

FIGURE 6-17

Barbiturates: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth Graders

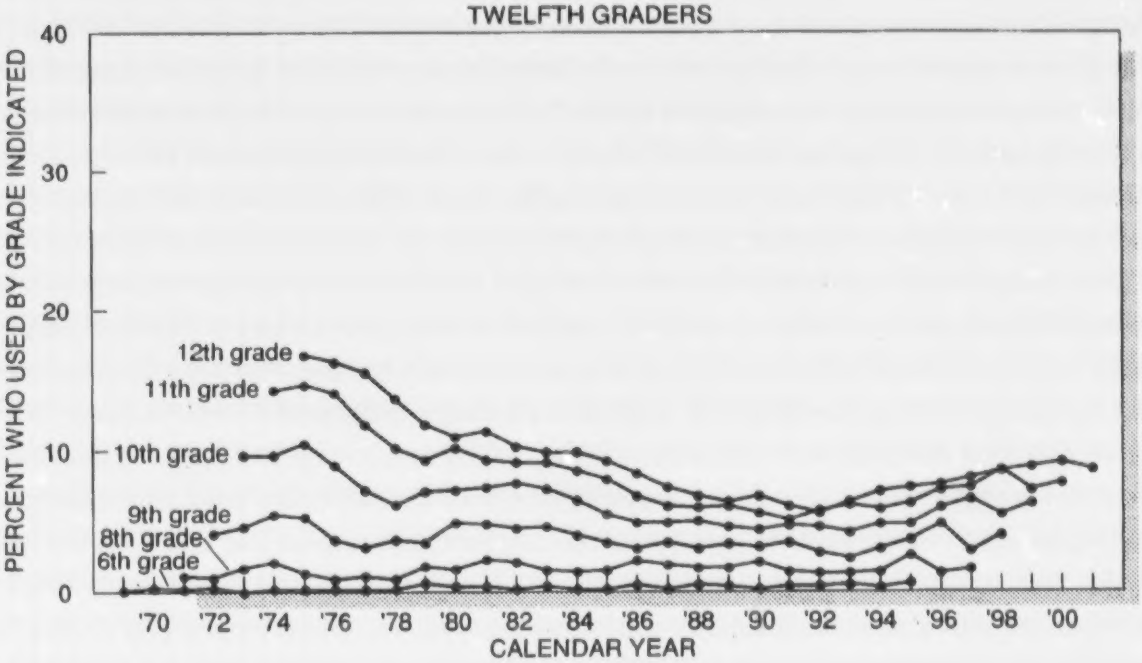


FIGURE 6-18

Methaqualone: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth Graders

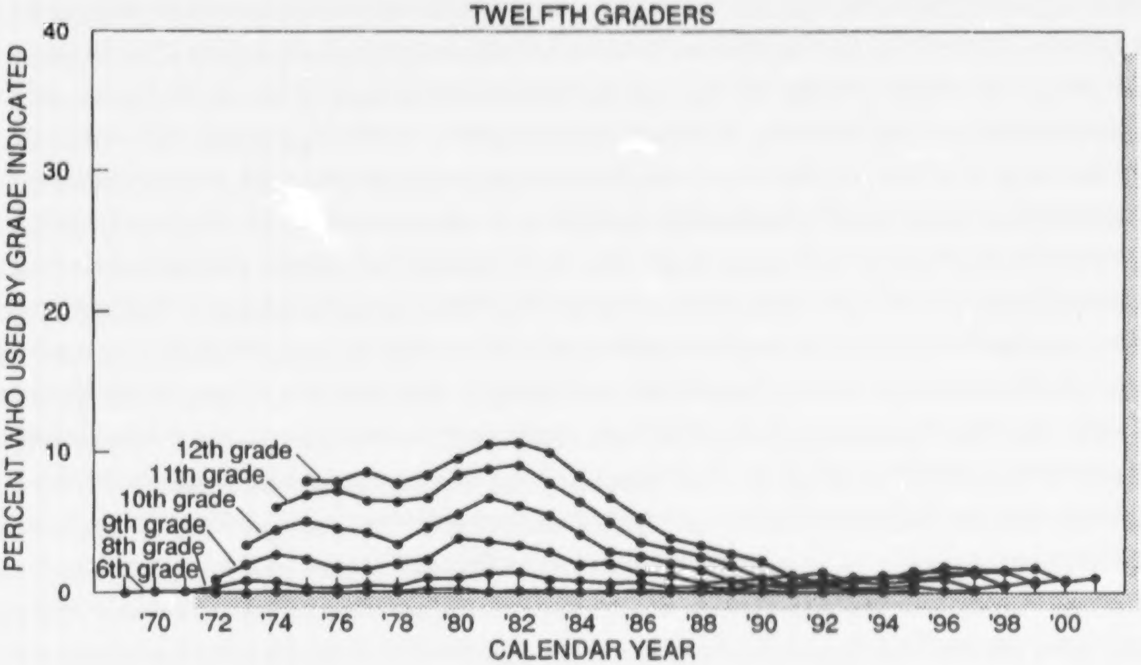


FIGURE 6-19

Tranquilizers: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth and Eighth Graders

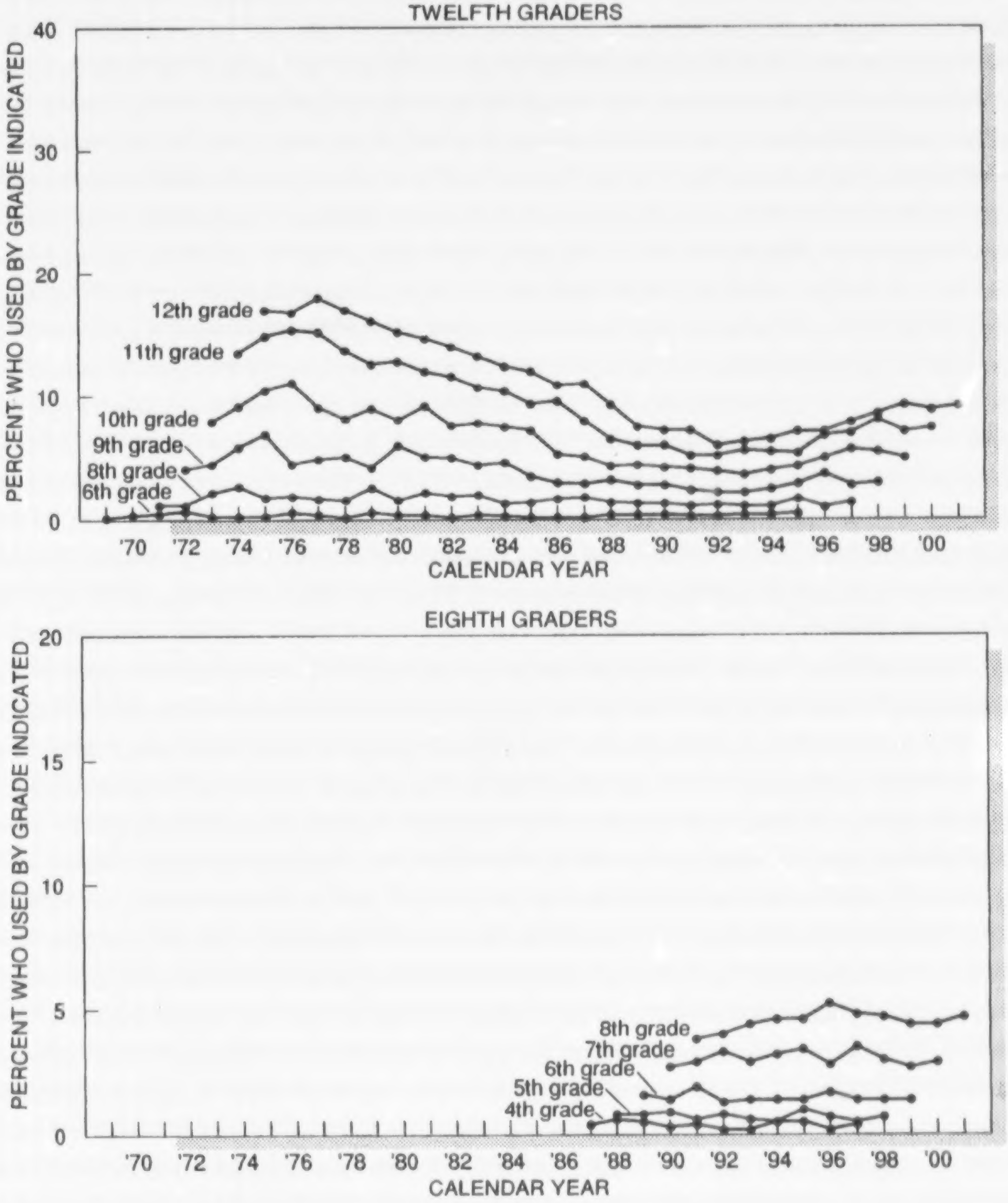
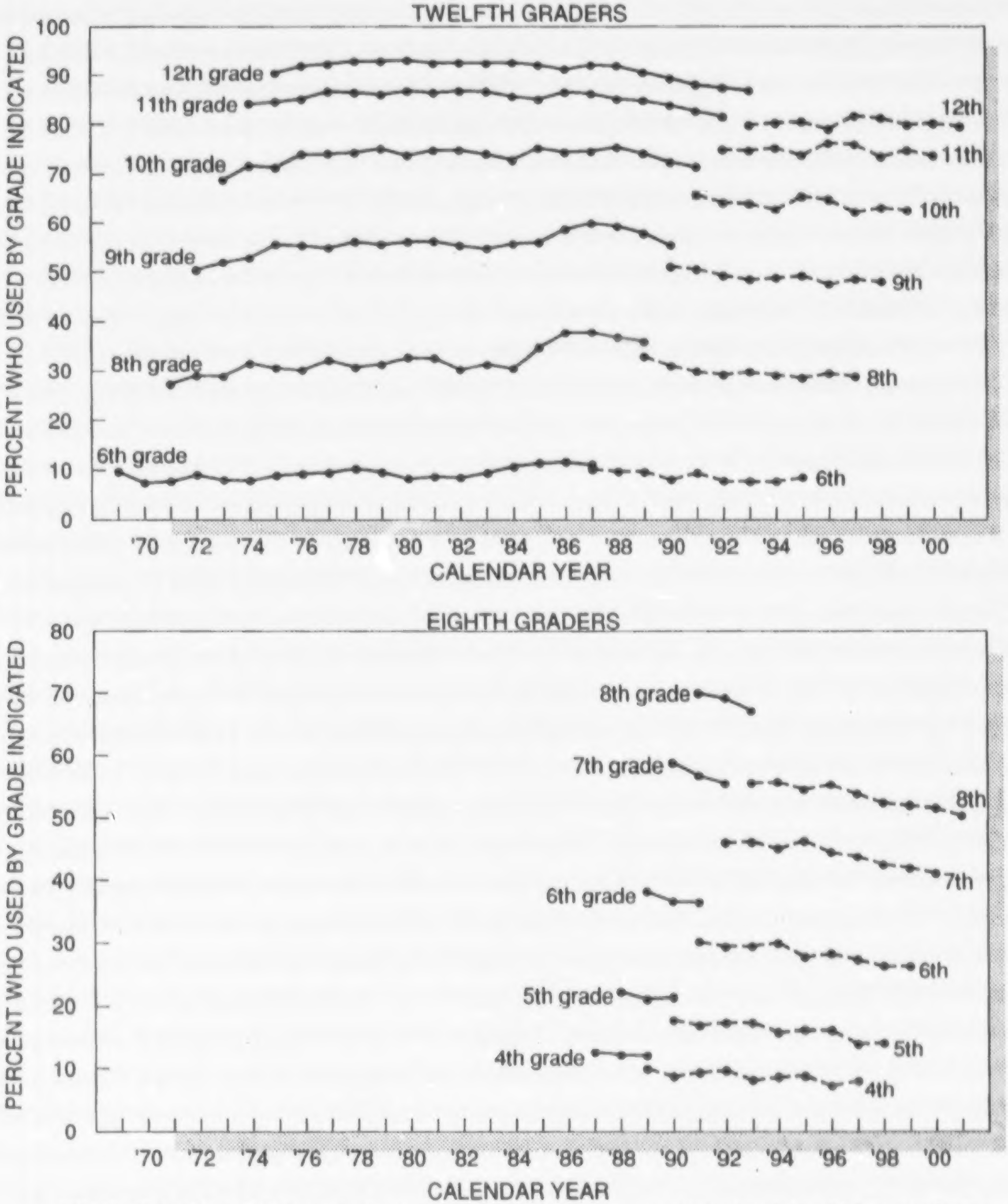


FIGURE 6-20

Alcohol: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders

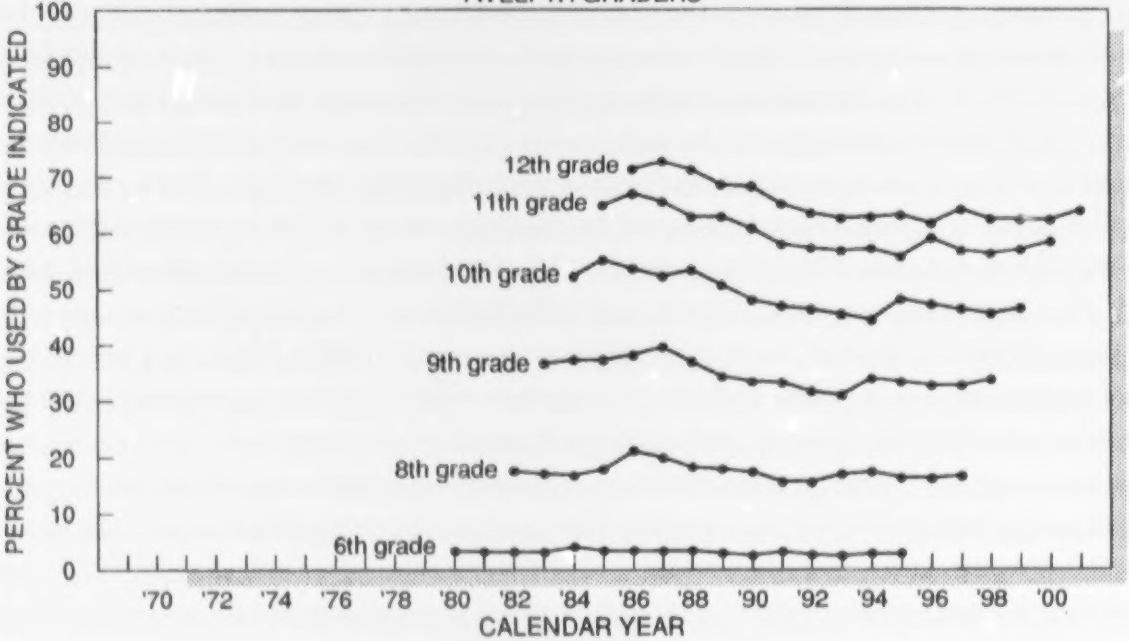


NOTE: Beginning in 1993 a revised set of questions on alcohol use was introduced, in which respondents were told that an occasion of use meant "more than just a few sips." The dotted lines connect percentages which are based on data from the revised questions. See text for details.

FIGURE 6-21

Been Drunk: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders

TWELFTH GRADERS



EIGHTH GRADERS

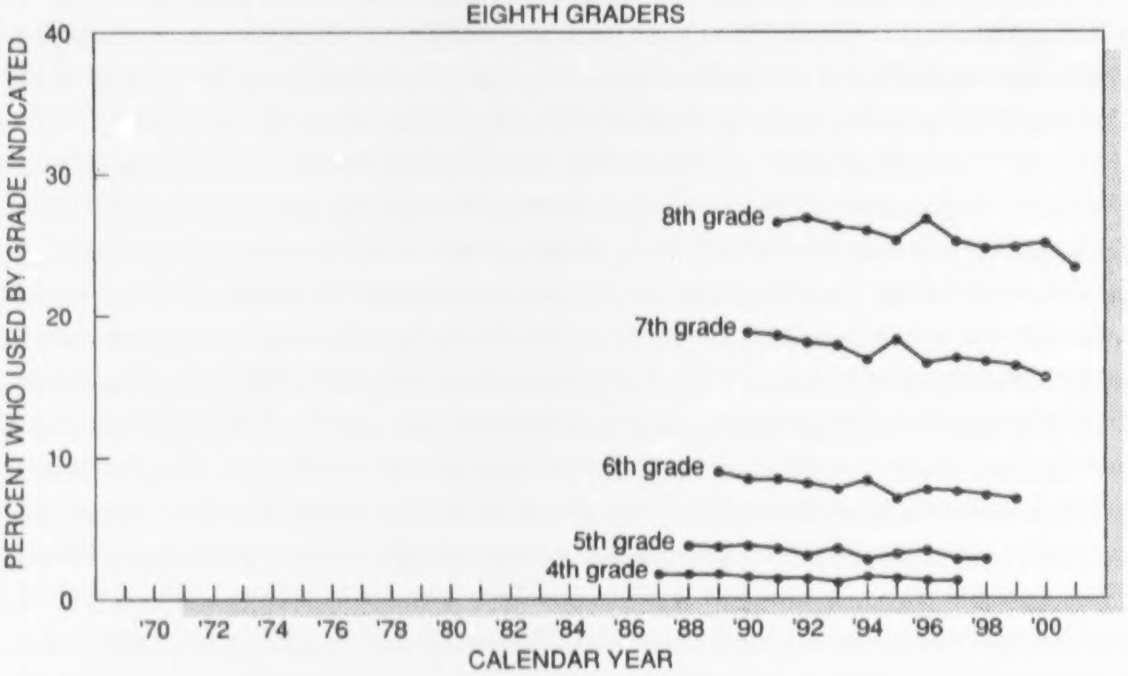
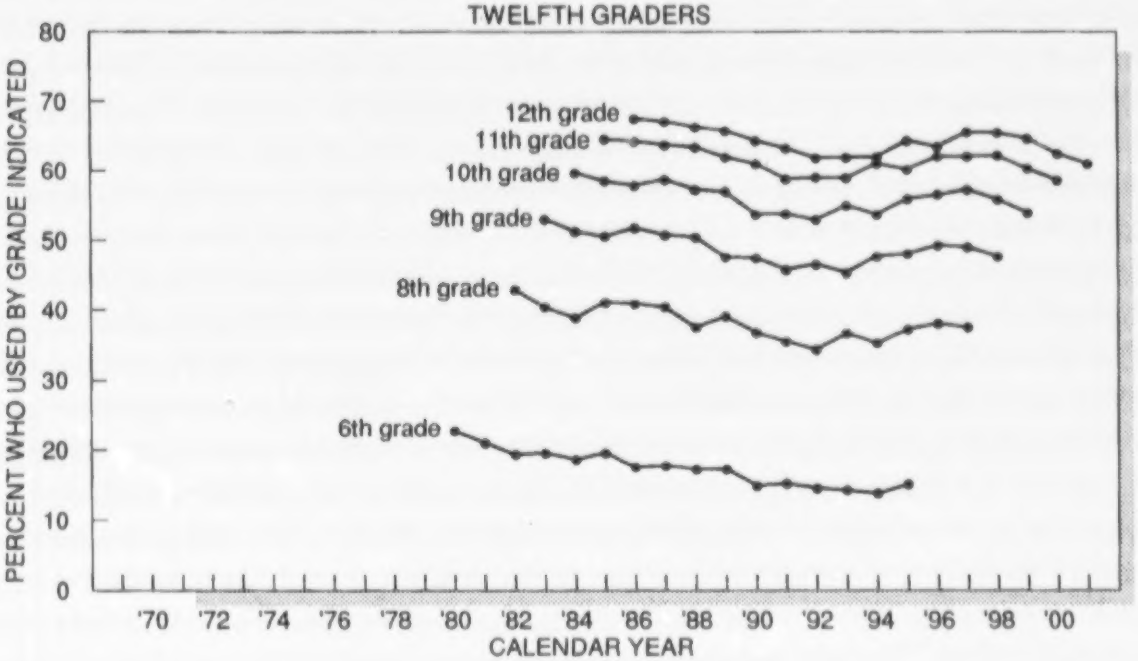


FIGURE 6-22

Cigarettes: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders



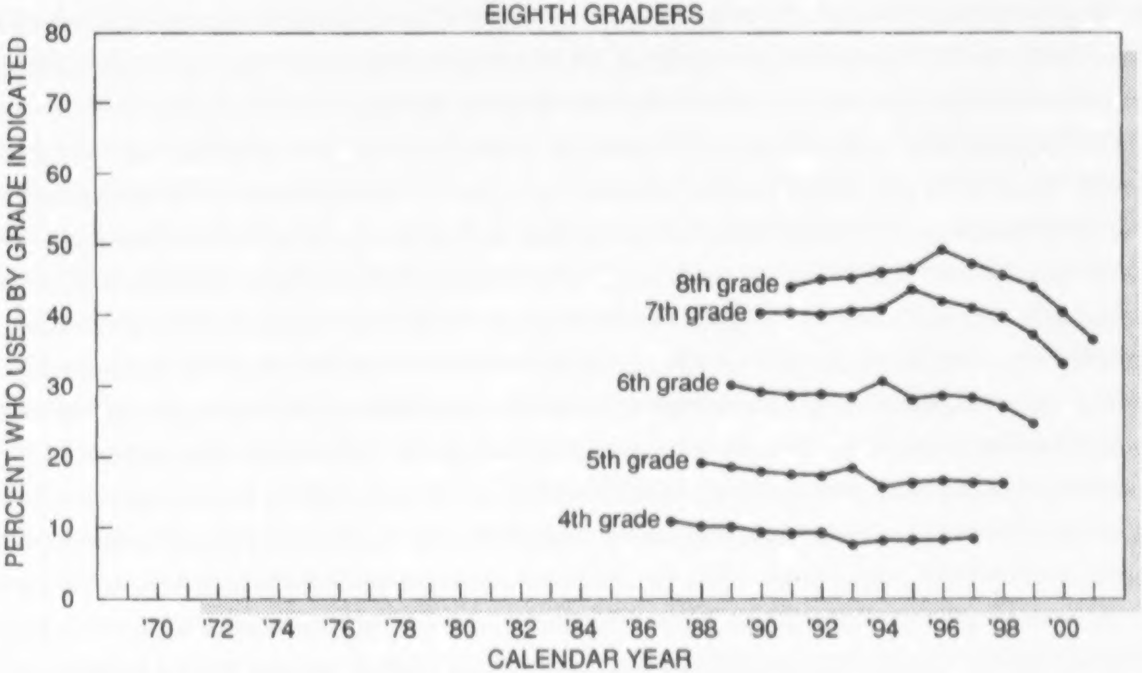


FIGURE 6-23

Cigarette Smoking on a Daily Basis: Trends in Lifetime Prevalence for Earlier Grade Levels

Based on Retrospective Reports from Twelfth and Eighth Graders

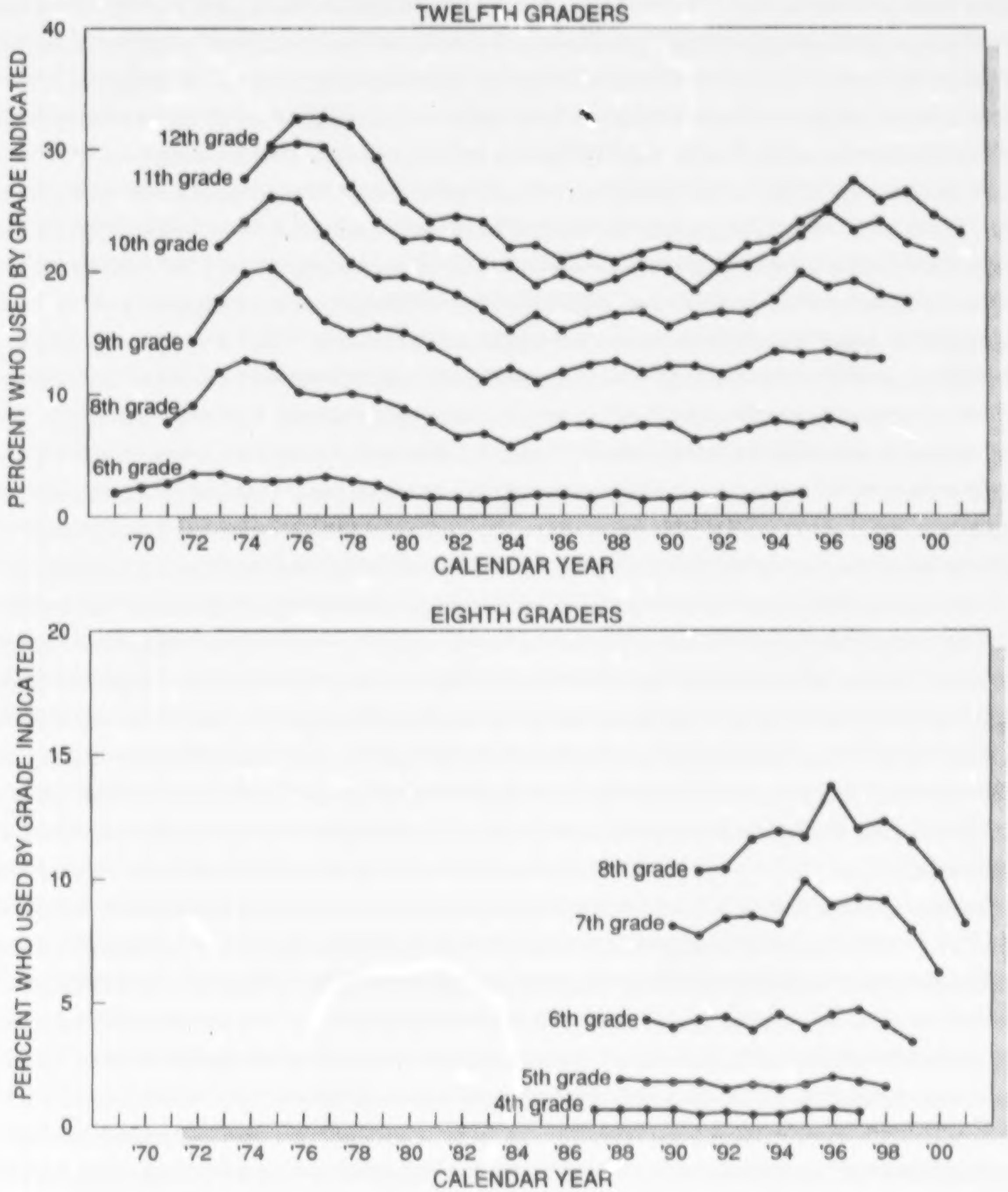
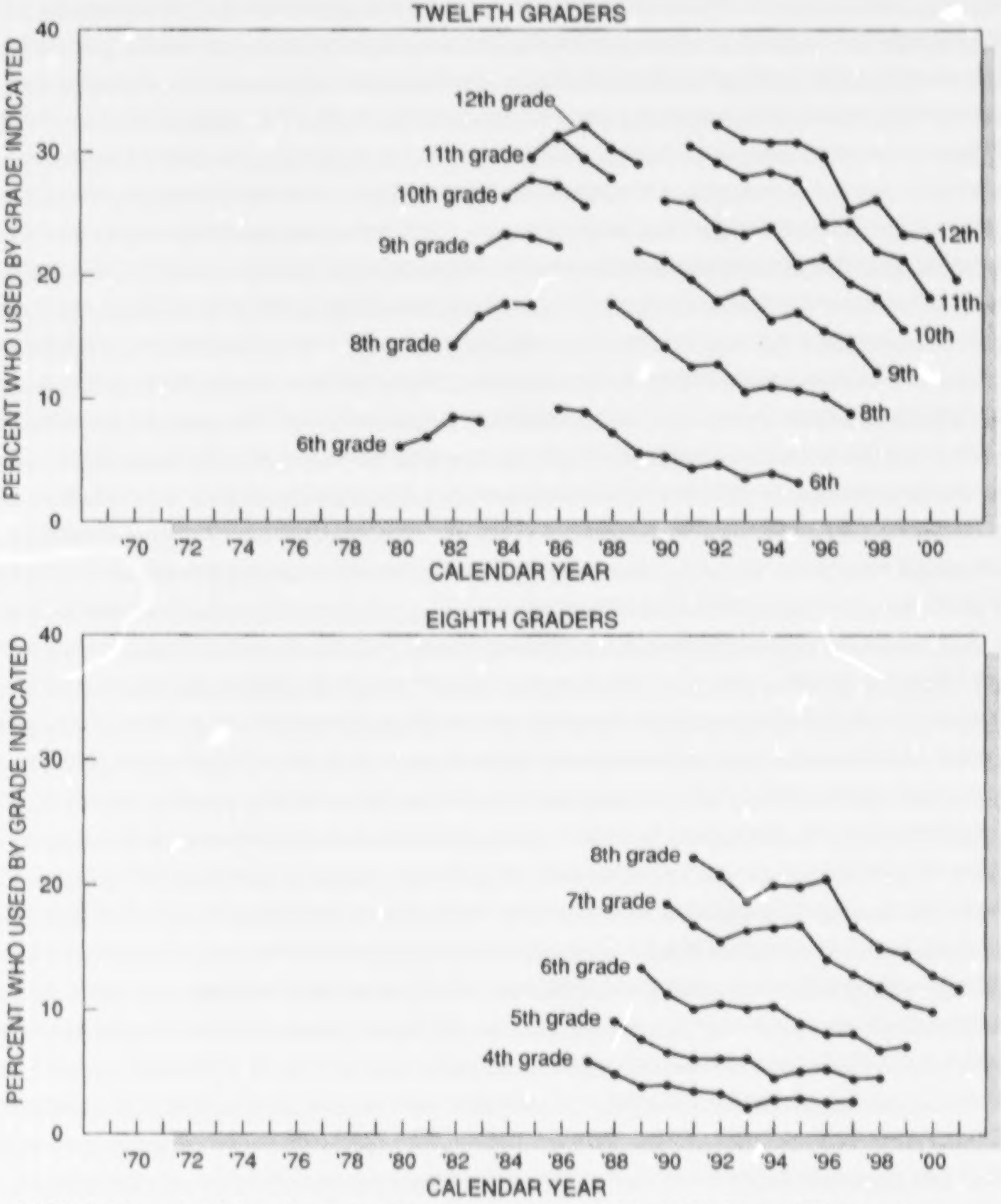


FIGURE 6-24

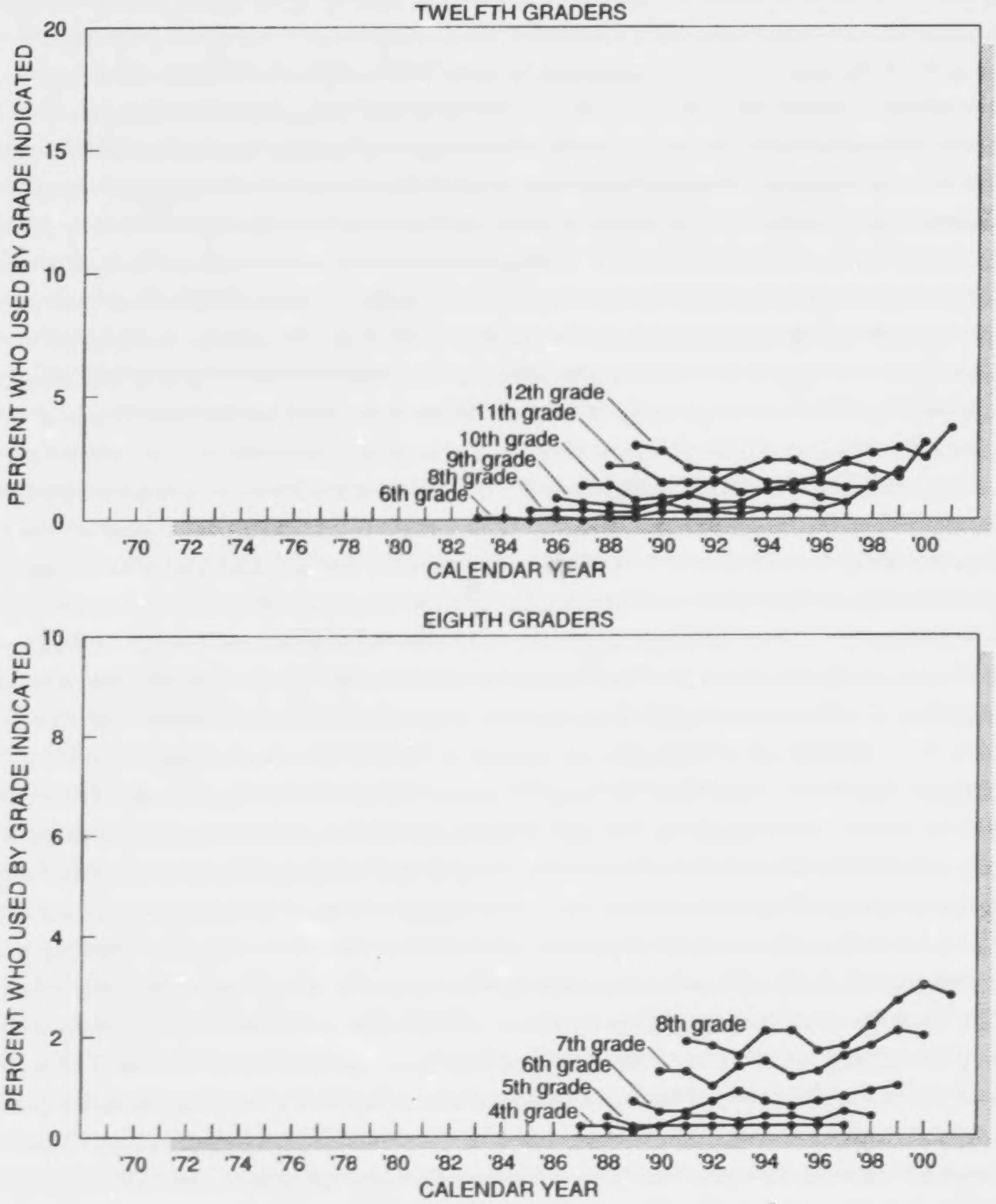
Smokeless Tobacco: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders



NOTE: Prevalence of smokeless tobacco was not asked of twelfth graders in 1990 and 1991. Prior to 1990 the prevalence question on smokeless tobacco was located near the end of one twelfth grade questionnaire form, whereas after 1991 the question was placed earlier and in a different form. This shift could explain the discontinuities between the corresponding lines for each grade.

FIGURE 6-25

Steroids: Trends in Lifetime Prevalence for Earlier Grade Levels
Based on Retrospective Reports from Twelfth and Eighth Graders



Chapter 7

DEGREE AND DURATION OF DRUG HIGHS

While emerging laboratory studies are assessing the multi-dimensional differences in subjective experience associated with using specific drugs, Monitoring the Future for some years has included questions on the intensity and duration of the "high" experienced by users of these drugs. Twelfth-grade respondents are asked in one of the six questionnaire forms to indicate—for each drug that they report having used in the past twelve months—how high they usually get and how long they usually stay high. The results for 2001 from those questions are discussed in this chapter, along with trends since 1975 in the degree and duration of the highs usually associated with each of the drugs. Since these questions were not asked of eighth and tenth graders, all data in this chapter are derived from the twelfth-grade respondents. These data do not address the many qualitative differences in the experience of being high, but they provide a potentially useful snapshot of current patterns and changes over time.

DEGREE AND DURATION OF HIGHS AMONG TWELFTH GRADERS

Figure 7-1 shows the proportion of 2001 seniors who said that they *usually* get "very" high, "moderately" high, "a little" high, or "not at all" high when they use a given type of drug. The percentages are based on all respondents who reported use of the given drug class in the previous 12 months, and each bar cumulates to 100%. The ordering of the drugs from left to right is based on the percentage of users of each who reported that they usually get "very" high. Because the statistics are based on self-reported users in only one of the six questionnaire forms used with seniors, the numbers of cases are sometimes small. The reader is advised to note the sample sizes given in the accompanying tables. To illustrate, in 2001 the number answering for LSD was 144; for other hallucinogens, 126; for cocaine, 99; for marijuana, 776; for narcotics other than heroin, 82; for amphetamines, 145; for alcohol, 1591; and for tranquilizers, 95.

- ***Hallucinogens*** (LSD and hallucinogens other than LSD) and ***heroin*** usually produce the most intense highs. Beginning in 1982, this question was omitted for heroin because of the small number of cases available each year. An averaging across earlier years indicated that it would rank very close to LSD, with a substantial majority of past-year users saying they usually get very high when they use it.

- Following in intensity of highs produced are ***marijuana*** and ***cocaine***. Three-quarters of the users of marijuana said they usually get moderately high or very high when using the drug. More than half of the cocaine users said they usually get moderately high or very high.

- A lower proportion of the users of three of the psychotherapeutic drug classes—***tranquilizers***, ***amphetamines***, and ***narcotics other than heroin***—say that they use them to get high; still, substantial proportions of users (from 47% for tranquilizers to 54% for other narcotics) said they usually get moderately or very high after taking these drugs.

- Relatively few of the large proportion of twelfth graders using ***alcohol*** said that they *usually* get very high when drinking, although over half said they usually get at least moderately high. For a given individual, we would expect more variability in the degree of intoxication achieved with alcohol from occasion to occasion than with most other drugs. Therefore, many drinkers probably get very high at least sometimes, even if that is not "usually" the case, which is what the question asks. Certainly the prevalence of occasional heavy drinking (having 5 or more drinks in a row) would suggest that to be the case.

Figure 7-2 presents the data on the duration of the highs usually obtained by users of each drug class. The drugs are arranged in the same order as in Figure 1 (intensity of highs) to permit an examination of the amount of correspondence between the degree and duration of highs.

- As can be seen in Figure 7-2, on the duration of drug highs, those drugs that result in the most intense highs generally tend to result in the longest highs, as well. For example, ***LSD*** and ***hallucinogens other than LSD*** hold the top two positions on both dimensions.

- The correspondence between degree and duration of highs is not perfect. For example, the highs obtained with ***marijuana*** tend to be relatively intense in degree but not long in duration compared to many other drugs. Nearly half of marijuana users (48%) said they usually stay high only one to two hours, and the modal duration is one to two hours. Still, over one-third of the users (38%) reported usually staying high three to six hours, and another 8% usually stay high for seven hours or more.

- Among ***cocaine*** users, 41% stay high one to two hours and 25% stay high three to six hours. One in five (22%) stay high seven or more hours. The remaining 12% said they usually don't get high.

- In sum, drugs vary considerably in both degree and duration of the highs usually obtained from them. Sizeable proportions of the users of all of these drugs responded that they usually get high for at least three hours per occasion. For a number of drugs—particularly the ***hallucinogens***, but also ***cocaine*** and ***amphetamines***—appreciable proportions usually stay high for seven hours or more.

TRENDS IN DEGREE AND DURATION OF DRUG HIGHS

Over the years several important shifts have occurred in the degree and duration of highs usually experienced by users of the drugs included in this study. Recall that only those students who used drugs in the prior 12 months answered these questions.

In Tables 7-1 through 7-8 we have presented trends in the degree and duration of highs experienced with the various drugs in two forms. First, the results are presented as a percent of recent users of the drug in question to provide an indication of the quantity consumed by users. They are also displayed as a percent of *all* respondents, so that the reader may get a sense of what proportion of the entire age group is in various degrees of involvement with each drug. Most of the following discussion will concentrate on changes in the proportions of recent users.

- Between 1978 and 1983—a period of considerable decline in ***marijuana*** use—there was a modest downward trend in the degree of the highs usually attained by users. To illustrate, in 1978, 73% of users said they usually get "moderately high" or "very high," but by 1983 only 64% said so. Later, from about 1988 through 1996, there was a fairly steady increase observed in the degree of the highs attained by marijuana users. (See Figure 7-3 for a charting of the cross-time trends in degree and durations of highs reported by past-year users.) From 1997 to 2001, there was very little change in either measure or in prevalence.

  Some interesting changes also took place in the average duration of ***marijuana*** highs between 1978 and 1983. Most marijuana users said they usually stay high either one to two hours *or* three to six hours. Between 1975 and 1983 there was a steady decline in the proportion of users saying they stay high three or more hours (from 52% in 1975 to 35% in 1983). Until 1979, the downward shift could have been due almost entirely to the fact that progressively more seniors were using marijuana; and the users in later classes, who might *not* have been users if they had been in earlier classes, probably tended to be relatively light users. We deduce this from the fact that the percentage of *all* seniors reporting three- to six-hour highs remained relatively unchanged from 1975 to 1979, while the percentage of *all* seniors reporting only one- to two-hour highs increased steadily—from 16% in 1975 to 25% in 1979.

  After 1979, however, the overall marijuana prevalence-of-use rate began to decline substantially, but the shift toward shorter average highs still continued through 1983. Thus, we must attribute this shift to another factor, and the one that seems most likely is a general shift toward a less frequent (or less intense) use of the drug, even among the most marijuana-prone segment. The drop in daily prevalence after 1979, disproportionately large relative to the drop in overall prevalence, is consistent with this interpretation. Also consistent is the fact that the average number of joints smoked per day (among those who reported any use in the prior 12 months) also dropped. In 1976, 55% of the past-year users of marijuana indicated that they averaged *less* than one joint per day in the prior 30 days, but by 1988 this proportion had risen to 83%. In sum, not only were fewer high school students using marijuana than in the early years of this study, but those who were using the drug seemed to be using it less frequently and to be taking smaller amounts (and doses of the active ingredient) per occasion, at least through 1988. By the mid-1990s, though, after an increase in the prevalence of use, a higher proportion of users again reported getting "very high" and staying high longer. There was not much change from 1997 to 2001, while prevalence has been fairly stable. The lower intensity of ***marijuana*** highs through the 1980s is of particular interest in light of evidence from other sources that the THC content of marijuana had risen substantially since the late 1970s. The evidence here would suggest that users titrated their intake to achieve a certain (perhaps declining) level of high and, thus, were smoking less marijuana as measured by volume.

- There are no clearly discernible long-term patterns in the intensity or duration of highs being experienced by users of ***LSD*** or ***hallucinogens other than LSD***, with the slight exception that the average duration of LSD highs dropped some from the mid-1970s to the early 1980s (as use declined) and then rose some through the 1990s (as use increased). (See Tables 7-2 and 7-3.)

- The ***degree*** of high obtained from ***cocaine*** showed some decline between 1975 and 1981 as prevalence increased. It then remained fairly constant between 1981 and 1991 (see Table 7-4). At the onset phase of the cocaine epidemic (1976-1979), the average *duration* of highs also shortened as the proportion of users reporting highs of two hours or less rose from 34% to 49%, perhaps reflecting that a lot of the additional users were less committed users. The proportion reporting these short highs continued to rise through 1989 to 64%, revealing that during the early part of the *decline* phase of the epidemic (1986-1992) the average duration of cocaine highs continued to decrease, just as it had done during the rise of the epidemic. This may reflect the fact that as concerns about the dangers of cocaine use grew, even those who decided to use cocaine were being more moderate in their use for fear of it leading to addiction. Since 1989 little change has occurred in the duration of cocaine highs.

- For ***narcotics other than heroin***, a general decline occurred between 1975 and 1992 both in the intensity of highs usually experienced and in the duration of those highs (see Table 7-5). In 1975, 39% of past-year users said they usually got "very high" compared to only 12% in 1992. The proportion usually staying high for seven or more hours dropped from 28% in 1975 to 11% in 1992. This shift was due, in part, to a substantial increase in the proportion of users who said they do not take these drugs "to get high" (4% in 1975, increasing to 28% by 1992). Because the actual prevalence of narcotic use dropped only modestly over that interval, these findings suggest that an increasing use for self-medication may have masked, to some degree, a fair-sized decrease in recreational use. Put another way, the drop in recreational use may have been even steeper than is apparent from the modest amount of decline in prevalence. Since 1992, an increase in the use of other narcotics (as well as illicit drugs in general) has been accompanied by an increase in the degree and duration of the highs experienced by users. In addition, some decline has occurred in the proportion of users saying that they do ***not*** take them to get high (now 19%).

- Between 1975 and 1981, as ***amphetamine*** use increased among seniors, the average *degree* of high obtained decreased (see Table 7-6), much as occurred with cocaine. The proportion of recent users usually getting very high or moderately high fell from 60% in 1975 to 37% in 1981. Consistent with this change, the proportion of users saying they simply "don't take them to get high" increased from 9% in 1975 to 20% by 1981, remaining roughly at that level through 1990. As use rose some in the 1990s, the numbers on degree and duration of highs have been a bit "bouncy" and have not shown any consistent trends. In general, about 20% of the users, when asked how high they usually get, said they "don't take them to get high."

  Also, the average reported *duration* of amphetamine highs declined over the longer term: 41% of the 1975 users said they usually stayed high seven or more hours compared to only 17% of the 1981 users.[53] In 2001, 18% of users said they usually stay high that long.

  These substantial decreases in both the degree and duration of highs between 1975 and 1981 strongly suggest a shift in the purposes for amphetamine use. An examination of data on self-reported reasons for use tends to confirm this conclusion. Between the mid-1970s and the mid-1980s, there was a decline in the frequency with which recent users mentioned social/recreational reasons for use and an increase in mentions of use for instrumental purposes.[54] The late 1980s saw some decline in the instrumental purposes ("to stay awake," " to get more energy," "to get through the day") and a leveling in the mentions of social/recreational reasons. In the 1990s, as use rose a bit, there was only a very slight upturn in mentions of social/recreational reasons for use.

- With respect to the social/recreational shifts from 1979 to 1984, the percentage of all recent users citing "to feel good or get high" as a reason for amphetamine use declined from 58% to 45%; in 2001, the figure was 45%. Similarly, "to have a good time with my friends" declined from 38% to 30% between 1979 and 1984; in 2001, the figure was 31%. There were shifts toward more instrumental use between 1976 and 1984: "to lose weight" increased by 15 percentage points (to 41%); "to get more energy" increased by 14 percentage points (to 69%); "to stay awake" increased by 10 percentage points (to 62%); and "to get through the day" increased by 10 percentage points (to 32%). Since about 1988, these instrumental objectives have been mentioned somewhat less often by users. In 2001, "to lose weight" was mentioned by 32% of recent users, "to get more energy" by 48%, "to stay awake" by 41%, and "to get through the day" by 18%.

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[53] In 1982, the questionnaire form containing the questions on degree and duration of highs clarified the amphetamine usage questions to eliminate the inappropriate inclusion of nonprescription amphetamines. One might have expected this change to have increased the degree and duration of highs reported, given that real amphetamines would be expected to have greater psychological impact on average; but the trends still continued downward that year.

[54] Johnston, L. D. & O'Malley, P. M. (1986). Why do the nation's students use drugs and alcohol? Self-reported reasons from nine national surveys. *Journal of Drug Issues, 16,* 29-66.

- Despite the earlier *relative* decline in recreational reasons for use of amphetamines, it also appears the ***absolute*** level of recreational use increased somewhat, though clearly not as steeply as the trends through 1981 in overall use might have suggested. The data on the percentage of seniors reporting exposure to people using amphetamines "to get high or for kicks," discussed further in Chapter 9, showed a definite increase between 1976 and 1981. There was no further increase in exposure to people using amphetamines for those purposes in 1982, suggesting that recreational use, as well as overall use, had leveled off. Since 1982, such exposure has decreased considerably (from 50% to 32% of all seniors in 2001), suggesting a substantial drop in the total number of people using amphetamines for recreational purposes.

- The degree and duration of highs achieved by ***tranquilizer*** users decreased in the 1980s (see Table 7-7). Only 15% of the 1980 senior users said they did not take them to get high, compared to 35% of 1990 users. However, as use has risen some during the 1990s, the proportion of users saying they do not use tranquilizers to get high has declined to between 9% and 20% in recent years, indicating that recreational use played an important role in this recent rise in tranquilizer use.

- Data are not collected for highs experienced in the use of ***inhalants***, the specific ***nitrites***, ***PCP***, ***ecstasy***, or ***heroin***.

- The intensity and duration of highs associated with ***alcohol*** use generally have been stable throughout the study period (see Table 7-8), with the following exceptions: (1) the proportion of *all* seniors who report getting "very high" has risen some in the 1990s (from 5.6% in 1993 to 9% in 1998, where it remained in 2001), and (2) the proportion saying they usually stay high on alcohol for seven hours or more has risen slightly over the same interval (from 3.4% in 1993 to 4.7% in 2001).

TABLE 7-1
Marijuana: Trends in Degree and Duration of Feeling High for Twelfth Graders

*Q. When you take marijuana or hashish how high do you usually get?**	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
% of Recent Users																											
Not at all high	6.9	5.7	7.5	6.3	6.0	6.3	4.9	4.6	6.6	6.8	7.2	5.1	6.8	6.6	7.6	5.8	7.2	7.8	9.0	7.0	8.1	5.7	5.4	6.1	6.8	6.3	5.4
A little high	22.1	20.9	22.5	20.3	22.5	23.5	29.0	26.3	29.4	29.0	27.2	27.6	29.5	30.2	22.8	23.2	21.6	25.9	19.4	21.7	22.3	17.9	18.6	22.0	19.8	22.6	18.7
Moderately high	45.5	47.7	43.5	46.8	47.5	47.7	45.7	45.6	41.9	36.9	41.8	43.8	40.9	40.3	44.1	40.8	42.8	39.3	45.9	40.6	40.8	47.5	45.1	43.6	43.7	39.6	42.8
Very high	25.5	25.7	26.5	26.6	24.0	22.6	20.4	23.5	22.0	27.4	23.8	23.5	22.9	22.9	25.5	30.3	28.4	27.0	25.8	30.7	28.8	28.9	30.9	28.4	29.8	31.4	33.1
Approx. N =	*1142*	*1266*	*1448*	*1873*	*1606*	*1495*	*1607*	*1588*	*1366*	*1264*	*1298*	*1177*	*1174*	*1142*	*782*	*694*	*591*	*605*	*669*	*779*	*916*	*788*	*998*	*944*	*812*	*809*	*776*
% of All Respondents																											
No use in last 12 months	60.0	55.5	52.4	49.8	49.4	52.4	53.2	54.7	58.2	59.9	59.0	61.2	63.5	64.9	71.6	72.7	76.2	76.8	74.8	69.6	64.1	66.5	61.2	62.6	63.6	61.8	63.0
Not at all high	2.8	2.5	3.6	3.2	3.0	3.0	2.3	2.1	2.8	2.7	2.9	2.0	2.5	2.3	2.2	1.6	1.7	1.8	2.3	2.1	2.9	1.9	2.1	2.3	2.5	2.4	2.0
A little high	8.8	9.3	10.7	10.2	11.4	11.2	13.6	11.9	12.3	11.6	11.2	10.7	10.7	10.6	6.5	6.3	5.1	6.0	4.9	6.6	8.0	6.0	7.2	8.2	7.2	8.6	6.9
Moderately high	18.2	21.2	20.7	23.5	24.0	22.7	21.4	20.6	17.5	14.8	17.2	17.0	14.9	14.1	12.5	11.1	10.2	9.1	11.6	12.4	14.7	15.9	17.5	16.3	15.9	15.1	15.8
Very high	10.2	11.4	12.6	13.4	12.2	10.8	9.6	10.6	9.2	11.0	9.8	9.1	8.4	8.1	7.2	8.3	6.7	6.3	6.5	9.3	10.4	9.7	12.0	10.6	10.8	12.0	12.2
Approx. N =	*2855*	*2845*	*3042*	*3731*	*3175*	*3143*	*3437*	*3506*	*3268*	*3154*	*3163*	*3033*	*3219*	*3250*	*2755*	*2542*	*2487*	*2614*	*2655*	*2558*	*2549*	*2355*	*2570*	*2526*	*2231*	*2121*	*2098*
*Q. When you take marijuana or hashish how long do you usually stay high?**																											
% of Recent Users																											
Usually don't get high	8.5	8.0	9.5	8.0	8.4	8.5	7.6	7.0	9.9	9.6	9.3	8.2	11.1	9.6	10.8	7.8	8.5	9.5	10.9	9.5	8.7	6.4	6.1	7.4	7.6	8.7	5.8
One to two hours	39.7	43.2	42.6	47.4	48.7	51.7	52.5	53.8	55.6	51.7	52.4	55.0	52.9	56.0	51.9	53.3	49.5	47.2	48.6	47.4	46.0	46.9	49.6	51.4	51.8	52.0	48.3
Three to six hours	45.4	43.7	42.7	39.0	37.4	35.0	35.7	34.2	30.4	33.1	34.0	32.9	32.2	30.2	33.3	33.1	34.4	37.7	36.8	36.1	37.6	39.3	37.1	35.7	33.5	34.9	38.2
Seven to 24 hours	5.9	4.9	4.7	5.1	5.0	4.1	4.0	4.5	3.5	5.0	3.9	3.3	3.7	3.8	3.3	5.4	6.9	4.9	3.2	5.5	6.7	6.2	6.0	5.1	5.9	3.6	6.0
More than 24 hours	0.5	0.2	0.6	0.5	0.5	0.7	0.2	0.5	0.6	0.7	0.4	0.6	0.1	0.4	0.8	0.4	0.8	0.8	0.4	1.4	1.0	1.2	1.1	0.4	1.2	0.9	1.6
Approx. N =	*1141*	*1261*	*1449*	*1873*	*1619*	*1500*	*1607*	*1593*	*1357*	*1268*	*1295*	*1176*	*1172*	*1147*	*787*	*694*	*589*	*602*	*666*	*774*	*911*	*789*	*996*	*945*	*814*	*807*	*781*
% of All Respondents																											
No use in last 12 months	60.0	55.5	52.4	49.8	49.2	52.3	53.2	54.6	58.4	59.9	59.0	61.2	63.6	64.8	71.5	72.7	76.3	76.9	74.9	69.7	64.2	66.5	61.2	62.6	63.6	61.9	62.9
Usually don't get high	3.4	3.6	4.5	4.0	4.3	4.0	3.6	3.2	4.1	3.8	3.8	3.2	4.0	3.4	3.1	2.1	2.0	2.2	2.7	2.9	3.1	2.1	2.4	2.8	2.8	3.3	2.2
One to two hours	15.9	19.2	20.3	23.8	24.7	24.6	24.5	24.4	23.1	20.7	21.5	21.3	19.3	19.7	14.8	14.6	11.7	10.9	12.2	14.4	16.5	15.7	19.3	19.2	18.9	19.8	17.9
Three to six hours	18.2	19.4	20.3	19.6	19.0	16.7	16.7	15.5	12.7	13.3	13.9	12.8	11.7	10.7	9.5	9.0	8.1	8.7	9.2	11.0	13.5	13.2	14.4	13.4	12.2	13.3	14.2
Seven to 24 hours	2.4	2.2	2.2	2.6	2.5	2.0	1.9	2.0	1.4	2.0	1.6	1.3	1.3	1.3	0.9	1.5	1.6	1.1	0.8	1.7	2.4	2.1	2.3	1.9	2.1	1.4	2.2
More than 24 hours	0.2	0.1	0.3	0.3	0.2	0.3	0.1	0.2	0.3	0.3	0.2	0.2	0.0	0.1	0.2	0.1	0.2	0.2	0.1	0.4	0.4	0.4	0.4	0.2	0.4	0.3	0.6
Approx. N =	*2853*	*2834*	*3044*	*3731*	*3188*	*3149*	*3437*	*3511*	*3259*	*3158*	*3160*	*3032*	*3218*	*3255*	*2760*	*2542*	*2485*	*2611*	*2652*	*2553*	*2544*	*2356*	*2568*	*2527*	*2233*	*2119*	*2103*

SOURCE: The Monitoring the Future Study, the University of Michigan.

*These questions appear in just one form. They are asked only of respondents who report use of the drug in the prior twelve months (i.e., "recent users").

TABLE 7-2
LSD: Trends in Degree and Duration of Feeling High for Twelfth Graders

Q. When you take LSD how high do you usually get?[a]	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
% of Recent Users																											
Not at all high	0.2	1.7	1.6	0.5	2.8	2.0	1.6	2.7	0.0	2.5	1.2	3.3	2.5	1.3	4.9	0.6	4.0	1.7	1.8	1.1	3.0	4.0	2.3	4.3	0.0	4.8	3.3
A little high	4.8	1.9	7.4	4.9	8.4	5.0	9.6	4.1	4.2	5.6	3.7	4.1	4.3	4.1	6.6	2.0	6.9	2.9	10.8	6.3	7.4	5.2	9.2	5.5	4.6	6.7	8.2
Moderately high	16.2	22.4	19.3	24.7	14.9	23.4	23.3	26.4	26.9	24.8	16.2	23.3	21.9	20.4	17.4	33.8	23.0	32.4	30.1	29.3	21.7	20.6	21.1	31.2	19.1	22.3	28.9
Very high	78.8	73.9	71.7	69.9	73.9	69.5	65.5	66.8	68.9	67.1	78.9	69.3	71.4	74.2	71.1	63.6	66.2	63.1	57.4	63.2	67.9	70.2	67.4	59.0	76.3	66.1	59.6
Approx. N =	*213*	*193*	*183*	*223*	*228*	*228*	*236*	*249*	*200*	*168*	*151*	*168*	*192*	*175*	*133*	*138*	*140*	*146*	*209*	*175*	*205*	*184*	*250*	*188*	*176*	*145*	*144*
% of All Respondents																											
No use in last 12 months	92.5	93.6	94.4	93.7	92.9	92.8	93.2	92.9	93.9	94.7	95.3	94.5	94.0	94.6	95.2	—	94.4	94.4	92.1	93.1	91.9	92.2	90.2	92.6	92.1	93.2	93.1
Not at all high	0.0	0.1	0.1	0.0	0.2	0.1	0.1	0.2	0.0	0.1	0.1	0.2	0.1	0.1	0.2	—	0.2	0.1	0.1	0.1	0.2	0.3	0.2	0.3	0.0	0.3	0.2
A little high	0.4	0.1	0.4	0.3	0.6	0.4	0.6	0.3	0.3	0.3	0.2	0.2	0.3	0.2	0.3	—	0.4	0.2	0.8	0.4	0.6	0.4	0.9	0.4	0.4	0.5	0.6
Moderately high	1.2	1.4	1.1	1.6	1.1	1.7	1.6	1.9	1.6	1.3	0.8	1.3	1.3	1.1	0.8	—	1.3	1.8	2.4	2.0	1.8	1.6	2.1	2.3	1.5	1.5	2.0
Very high	5.9	4.7	4.0	4.4	5.2	5.0	4.4	4.7	4.2	3.5	3.7	3.8	4.3	4.0	3.4	—	3.7	3.5	4.5	4.3	5.5	5.5	6.6	4.4	6.0	4.5	4.1
Approx. N =	*2840*	*3016*	*3268*	*3540*	*3228*	*3182*	*3488*	*3506*	*3277*	*3166*	*3179*	*3060*	*3214*	*3271*	*2763*	—	*2494*	*2619*	*2655*	*2547*	*2517*	*2347*	*2543*	*2525*	*2226*	*2128*	*2089*
Q. When you take LSD how long do you usually stay high?[a]																											
% of Recent Users																											
Usually don't get high	1.6	2.3	2.5	0.5	3.4	2.3	1.6	1.5	0.0	3.2	1.2	3.3	2.5	1.0	6.1	0.6	3.5	1.7	3.4	0.5	3.8	2.2	2.4	3.2	0.6	3.4	3.0
One to two hours	1.3	1.7	3.8	3.9	4.0	2.5	5.4	3.6	2.6	2.5	3.3	2.0	4.9	2.0	4.1	6.6	4.5	5.5	3.8	5.7	2.5	5.0	3.9	2.6	1.9	3.7	4.0
Three to six hours	22.7	30.7	30.5	31.9	33.1	34.6	35.5	30.7	43.6	29.4	32.4	32.8	27.6	28.2	19.2	24.4	16.0	21.4	27.7	20.1	21.1	19.6	25.4	29.7	21.9	31.7	32.7
Seven to 24 hours	69.8	59.9	59.8	58.5	52.1	55.4	54.6	62.5	49.3	60.9	60.3	59.8	59.4	64.3	65.9	63.1	73.8	66.3	62.3	70.6	67.0	70.0	62.3	61.4	71.0	55.6	55.9
More than 24 hours	4.6	5.5	3.4	5.3	7.4	5.2	2.9	1.7	4.6	4.0	2.8	2.2	5.6	4.5	4.7	5.2	2.2	5.0	2.9	3.0	5.7	3.3	6.0	3.2	4.6	5.6	4.4
Approx. N =	*215*	*193*	*182*	*224*	*228*	*226*	*236*	*252*	*199*	*168*	*153*	*168*	*191*	*178*	*133*	*137*	*141*	*147*	*205*	*176*	*203*	*186*	*252*	*186*	*173*	*143*	*145*
% of All Respondents																											
No use in last 12 months	92.5	93.6	94.4	93.7	92.9	92.9	93.2	92.8	93.9	94.7	95.2	94.5	94.1	94.6	95.2	—	94.4	94.4	92.3	93.1	91.9	92.1	90.1	92.6	92.2	93.3	93.1
Usually don't get high	0.1	0.1	0.1	0.0	0.2	0.2	0.1	0.1	0.0	0.2	0.1	0.2	0.1	0.1	0.3	—	0.2	0.1	0.3	0.0	0.3	0.2	0.2	0.2	0.0	0.2	0.2
One to two hours	0.1	0.1	0.2	0.3	0.3	0.2	0.4	0.3	0.2	0.1	0.2	0.1	0.3	0.1	0.2	—	0.3	0.3	0.3	0.4	0.2	0.4	0.4	0.2	0.1	0.3	0.3
Three to six hours	1.7	2.0	1.7	2.0	2.3	2.5	2.4	2.2	2.6	1.6	1.6	1.8	1.6	1.5	0.9	—	0.9	1.2	2.1	1.4	1.7	1.6	2.5	2.2	1.7	2.1	2.3
Seven to 24 hours	5.2	3.8	3.3	3.7	3.7	3.9	3.7	4.5	3.0	3.2	2.9	3.3	3.5	3.5	3.2	—	4.2	3.7	4.8	4.9	5.4	5.6	6.2	4.5	5.5	3.7	3.9
More than 24 hours	0.3	0.4	0.2	0.3	0.5	0.4	0.2	0.1	0.3	0.2	0.1	0.1	0.3	0.2	0.2	—	0.1	0.3	0.2	0.2	0.5	0.3	0.6	0.2	0.4	0.4	0.3
Approx. N =	*2867*	*3016*	*3250*	*3556*	*3227*	*3180*	*3487*	*3509*	*3276*	*3166*	*3181*	*3060*	*3214*	*3274*	*2763*	—	*2495*	*2619*	*2651*	*2548*	*2515*	*2349*	*2545*	*2524*	*2223*	*2126*	*2090*

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] These questions appear in just one form. They are asked only of respondents who report use of the drug in the prior twelve months (i.e., "recent users").

TABLE 7-3
Hallucinogens Other than LSD: Trends in Degree and Duration of Feeling High for Twelfth Graders

Q. When you take hallucinogens other than LSD how high do you usually get?[*]	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
% of Recent Users																											
Not at all high	2.4	1.2	1.2	1.2	2.1	0.9	2.3	2.5	4.0	4.9	3.2	3.4	5.6	3.1	1.0	2.5	5.0	1.0	7.6	8.8	3.1	4.0	3.1	1.9	2.8	1.7	5.1
A little high	7.9	9.6	8.4	8.3	9.6	10.4	12.9	10.3	8.2	10.8	9.5	13.6	13.6	8.8	8.2	5.8	9.9	18.2	10.8	12.6	4.4	7.9	10.7	5.3	7.2	4.5	5.6
Moderately high	35.5	39.6	40.8	36.3	37.7	38.9	37.9	35.9	36.6	38.0	36.1	36.8	32.1	28.7	33.4	41.2	41.0	32.0	37.4	25.5	24.5	26.9	20.4	38.0	16.1	26.4	31.3
Very high	54.1	49.7	49.6	54.3	50.6	49.9	46.9	51.3	51.2	46.3	51.3	46.3	48.6	59.5	57.4	50.5	44.1	48.8	44.2	53.1	68.1	61.2	65.9	54.8	73.8	67.5	58.1
Approx. N =	*322*	*237*	*246*	*326*	*253*	*255*	*246*	*201*	*170*	*153*	*134*	*114*	*115*	*85*	*53*	*58*	*39*	*47*	*62*	*67*	*86*	*103*	*120*	*110*	*98*	*97*	*126*
% of All Respondents																											
No use in last 12 months	90.4	93.0	93.0	92.7	91.9	91.8	92.8	94.2	94.7	95.1	95.7	96.2	96.4	97.4	98.1	—	98.4	98.2	97.6	97.3	96.6	95.6	95.2	95.6	95.6	95.3	93.9
Not at all high	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.1	0.2	0.2	0.1	0.1	0.2	0.1	0.0	—	0.1	0.0	0.2	0.2	0.1	0.2	0.2	0.1	0.1	0.1	0.3
A little high	0.8	0.7	0.6	0.6	0.8	0.9	0.9	0.6	0.4	0.5	0.4	0.5	0.5	0.2	0.2	—	0.2	0.3	0.3	0.3	0.1	0.4	0.5	0.2	0.3	0.2	0.3
Moderately high	3.4	2.8	2.9	2.6	3.0	3.2	2.7	2.1	1.9	1.9	1.5	1.4	1.2	0.8	0.6	—	0.6	0.6	0.9	0.7	0.8	1.2	1.0	1.7	0.7	1.2	1.9
Very high	5.2	3.5	3.5	4.0	4.1	4.1	3.4	3.0	2.7	2.3	2.2	1.8	1.8	1.6	1.1	—	0.7	0.9	1.0	1.4	2.3	2.7	3.2	2.4	3.3	3.2	3.6
Approx. N =	*3354*	*3386*	*3514*	*4466*	*3127*	*3098*	*3407*	*3466*	*3235*	*3129*	*3142*	*3004*	*3182*	*3220*	*2734*	—	*2472*	*2591*	*2629*	*2523*	*2515*	*2319*	*2500*	*2486*	*2213*	*2079*	*2058*
Q. When you take hallucinogens other than LSD how long do you usually stay high?[*]																											
% of Recent Users																											
Usually don't get high	2.0	1.2	1.1	1.3	2.5	1.3	2.8	3.6	4.8	4.0	0.9	5.2	7.2	3.9	4.2	2.5	7.6	6.1	3.6	7.2	3.1	2.4	4.3	2.1	2.8	2.1	3.8
One to two hours	8.5	9.4	7.0	8.4	8.3	7.8	8.3	6.6	7.9	8.9	12.9	9.1	9.8	7.8	16.5	13.8	12.3	15.3	6.9	11.5	6.2	8.8	5.3	2.6	7.1	10.0	8.0
Three to six hours	41.3	46.1	45.5	47.7	48.2	49.1	47.1	52.6	54.1	48.7	46.7	43.3	46.0	46.2	35.3	46.8	25.9	38.9	51.9	41.5	35.0	55.6	57.9	56.0	44.9	52.0	49.5
Seven to 24 hours	45.6	39.9	44.1	41.1	37.2	39.6	38.7	34.4	30.5	36.0	37.1	40.6	35.8	40.5	42.1	25.8	52.4	33.3	37.7	39.8	50.2	29.5	30.6	37.3	42.2	32.7	35.5
More than 24 hours	2.7	3.4	2.3	1.5	3.8	2.2	3.1	2.8	2.7	2.5	2.5	1.9	1.3	1.6	1.9	11.2	1.8	6.4	0.0	0.0	5.5	3.6	2.0	1.9	3.1	3.2	3.1
Approx. N =	*322*	*238*	*243*	*326*	*249*	*254*	*246*	*203*	*171*	*153*	*132*	*115*	*116*	*84*	*55*	*60*	*40*	*48*	*59*	*68*	*86*	*101*	*118*	*110*	*98*	*97*	*125*
% of All Respondents																											
No use in last 12 months	90.4	93.0	93.0	92.7	92.0	91.8	92.8	94.1	94.7	95.1	95.8	96.2	96.4	97.4	98.0	—	98.4	98.1	97.8	97.3	96.6	95.6	95.3	95.6	95.6	95.3	93.9
Usually don't get high	0.2	0.1	0.1	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.0	0.2	0.3	0.1	0.1	—	0.1	0.1	0.1	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.2
One to two hours	0.8	0.7	0.5	0.6	0.7	0.6	0.6	0.4	0.4	0.4	0.5	0.3	0.4	0.2	0.3	—	0.2	0.3	0.2	0.3	0.2	0.4	0.2	0.1	0.3	0.5	0.5
Three to six hours	4.0	3.2	3.2	3.5	3.8	4.0	3.4	3.1	2.9	2.4	2.0	1.7	1.7	1.2	0.7	—	0.4	0.7	1.2	1.1	1.2	2.4	2.7	2.5	2.0	2.4	3.0
Seven to 24 hours	4.4	2.8	3.1	3.0	3.0	3.2	2.8	2.0	1.6	1.8	1.6	1.6	1.3	1.1	0.8	—	0.8	0.6	0.8	1.1	1.7	1.3	1.4	1.7	1.9	1.5	2.2
More than 24 hours	0.3	0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.1	0.1	0.1	0.1	0.0	0.0	0.0	—	0.0	0.1	0.0	0.0	0.2	0.2	0.1	0.1	0.1	0.1	0.2
Approx. N =	*3354*	*3400*	*3471*	*4466*	*3123*	*3096*	*3407*	*3467*	*3236*	*3129*	*3140*	*3005*	*3183*	*3219*	*2736*	—	*2473*	*2592*	*2626*	*2524*	*2515*	*2317*	*2498*	*2486*	*2213*	*2079*	*2057*

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[*] These questions appear in just one form. They are asked only of respondents who report use of the drug in the prior twelve months (i.e., "recent users").

TABLE 7-4
Cocaine: Trends in Degree and Duration of Feeling High for Twelfth Graders

Q. When you take cocaine how high do you usually get?[a]	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
% of Recent Users																											
I don't take it to get high	1.1	0.8	0.3	0.0	2.1	1.9	0.6	2.1	1.9	2.8	3.1	4.1	3.6	4.9	4.6	3.9	2.7	3.1	7.7	2.6	4.6	9.5	4.6	7.6	5.1	5.1	11.7
Not at all high	3.5	2.9	4.5	5.5	3.6	3.6	7.4	6.4	10.1	6.0	6.8	4.6	5.9	5.7	7.9	10.2	11.3	6.4	12.1	10.5	8.9	5.1	5.1	10.8	7.1	8.6	8.9
A little high	18.8	11.8	17.9	17.6	19.6	22.9	22.1	22.7	25.7	23.5	24.5	24.6	18.8	19.1	12.1	18.1	13.2	22.1	19.7	16.3	12.9	13.2	15.4	16.6	12.0	29.1	14.4
Moderately high	40.1	45.1	45.9	38.2	50.6	43.7	42.4	44.5	37.0	39.3	43.1	43.4	44.0	43.3	39.7	36.1	45.1	31.8	33.6	33.0	27.8	46.7	30.6	35.2	45.9	29.0	32.2
Very high	36.6	39.5	31.4	38.6	24.2	27.9	27.5	24.3	25.3	28.4	22.5	23.5	27.7	27.0	35.7	31.8	27.8	36.5	27.0	37.5	45.8	25.4	44.3	29.8	29.9	28.2	32.7
Approx. N =	*124*	*166*	*223*	*335*	*394*	*360*	*434*	*421*	*343*	*362*	*409*	*407*	*329*	*264*	*156*	*109*	*71*	*66*	*89*	*79*	*85*	*76*	*127*	*119*	*126*	*99*	*99*
% of All Respondents																											
No use in last 12 months	94.4	94.0	92.8	91.0	87.5	88.4	87.2	87.9	89.4	88.4	87.0	86.4	89.5	91.7	94.2	—	97.1	97.4	96.5	96.8	96.5	96.6	94.8	95.1	94.2	95.1	95.1
I don't take it to get high	0.1	0.0	0.0	0.0	0.3	0.2	0.1	0.3	0.2	0.3	0.4	0.6	0.4	0.4	0.3	—	0.1	0.1	0.3	0.1	0.2	0.3	0.2	0.4	0.3	0.3	0.6
Not at all high	0.2	0.2	0.3	0.5	0.5	0.4	0.9	0.8	1.1	0.7	0.9	0.6	0.6	0.5	0.5	—	0.3	0.2	0.4	0.3	0.3	0.2	0.3	0.5	0.4	0.4	0.4
A little high	1.1	0.7	1.3	1.6	2.5	2.7	2.8	2.7	2.7	2.7	3.2	3.3	2.0	1.6	0.7	—	0.4	0.6	0.7	0.5	0.4	0.4	0.8	0.8	0.7	1.4	0.7
Moderately high	2.2	2.7	3.3	3.4	6.3	5.1	5.4	5.4	3.9	4.6	5.6	5.9	4.6	3.6	2.3	—	1.3	0.8	1.2	1.1	1.0	1.6	1.6	1.7	2.7	1.4	1.6
Very high	2.0	2.4	2.3	3.5	3.0	3.2	3.5	2.9	2.7	3.3	2.9	3.2	2.9	2.2	2.1	—	0.8	0.9	0.9	1.2	1.6	0.9	2.3	1.5	1.7	1.4	1.6
Approx. N =	*2214*	*2767*	*3097*	*3722*	*3142*	*3105*	*3400*	*3473*	*3235*	*3114*	*3142*	*2992*	*3130*	*3179*	*2685*	—	*2420*	*2560*	*2550*	*2473*	*2463*	*2261*	*2452*	*2424*	*2169*	*2024*	*2020*
Q. When you take cocaine how long do you usually stay high?[a]																											
% of Recent Users																											
Usually don't get high	3.4	2.8	3.6	5.8	5.8	7.2	8.2	8.2	14.5	9.7	9.2	8.7	9.8	12.8	11.3	11.6	21.5	6.6	16.9	10.4	13.0	6.3	10.5	14.1	9.8	15.0	12.1
One to two hours	31.0	27.6	31.9	33.2	43.3	38.2	45.9	43.2	41.3	43.7	48.6	55.2	44.7	49.3	52.6	52.0	34.0	41.8	42.7	52.8	41.4	51.8	51.3	44.4	39.7	39.8	40.9
Three to six hours	47.5	46.8	49.4	39.6	36.5	36.0	33.8	34.5	34.1	33.6	31.8	27.7	29.2	25.6	20.9	25.8	32.3	25.0	24.2	20.1	18.7	22.9	24.9	29.6	36.1	28.5	25.0
Seven to 24 hours	14.4	19.6	13.1	20.9	14.1	17.3	9.8	13.3	8.7	11.8	8.5	7.1	13.0	10.1	9.8	8.1	10.4	20.2	12.9	12.8	21.1	11.5	13.2	6.7	12.9	11.4	18.2
More than 24 hours	3.7	3.1	1.9	0.5	0.3	1.3	2.3	0.8	1.4	1.1	1.9	1.3	3.3	2.3	5.3	2.5	1.7	6.5	3.3	3.9	5.7	7.5	0.0	5.2	1.5	5.3	3.9
Approx. N =	*125*	*165*	*220*	*331*	*392*	*357*	*432*	*419*	*344*	*360*	*403*	*408*	*329*	*262*	*151*	*108*	*72*	*64*	*92*	*74*	*83*	*69*	*128*	*115*	*126*	*98*	*99*
% of All Respondents																											
No use in last 12 months	94.4	94.0	92.8	91.0	87.5	88.5	87.3	87.9	89.4	88.4	87.1	86.4	89.5	91.7	94.4	—	97.0	97.5	96.4	97.0	96.6	96.9	94.8	95.2	94.2	95.2	95.1
Usually don't get high	0.2	0.2	0.3	0.5	0.7	0.8	1.0	1.0	1.5	1.1	1.2	1.2	1.0	1.1	0.6	—	0.6	0.2	0.6	0.3	0.4	0.2	0.5	0.7	0.6	0.7	0.6
One to two hours	1.7	1.7	2.3	3.0	5.4	4.4	5.8	5.2	4.4	5.1	6.2	7.5	4.7	4.1	3.0	—	1.0	1.0	1.5	1.6	1.4	1.6	2.7	2.1	2.3	1.9	2.0
Three to six hours	2.7	2.8	3.6	3.6	4.6	4.2	4.3	4.2	3.6	3.9	4.1	3.8	3.1	2.1	1.2	—	1.0	0.6	0.9	0.6	0.6	0.7	1.3	1.4	2.1	1.4	1.2
Seven to 24 hours	0.8	1.2	0.9	1.9	1.8	2.0	1.2	1.6	0.9	1.4	1.1	1.0	1.4	0.8	0.6	—	0.3	0.5	0.5	0.4	0.7	0.4	0.7	0.3	0.7	0.6	0.9
More than 24 hours	0.2	0.2	0.1	0.0	0.0	0.1	0.3	0.1	0.2	0.1	0.2	0.2	0.3	0.2	0.3	—	0.0	0.2	0.1	0.1	0.2	0.2	0.0	0.2	0.1	0.3	0.2
Approx. N =	*2232*	*2750*	*3056*	*3678*	*3140*	*3102*	*3398*	*3471*	*3235*	*3112*	*3137*	*2993*	*3130*	*3178*	*2680*	—	*2420*	*2559*	*2553*	*2468*	*2461*	*2254*	*2453*	*2421*	*2168*	*2022*	*2020*

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] These questions appear in just one form. They are asked only of respondents who report use of the drug in the prior twelve months (i.e., "recent users").

TABLE 7-5
Other Narcotics: Trends in Degree and Duration of Feeling High for Twelfth Graders

*Q. When you take opiates other than heroin how high do you usually get?*ᵃ	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
% of Recent Users																											
I don't take them to get high	4.1	7.6	7.8	10.4	10.0	8.6	14.5	17.8	21.9	22.5	21.3	19.6	28.8	24.5	29.6	36.6	20.5	27.7	25.1	22.7	13.7	23.4	12.8	12.6	14.2	19.6	18.6
Not at all high	3.6	6.1	2.8	5.9	8.1	10.5	11.6	3.8	9.9	7.5	12.1	12.1	19.1	7.9	12.2	10.1	9.9	26.7	18.0	10.8	13.0	12.3	5.0	9.8	10.6	9.0	0.0
A little high	8.8	18.3	25.9	17.5	24.3	21.6	30.0	26.6	17.9	29.4	28.5	25.2	18.7	19.3	15.1	18.5	20.[illegible]	19.2	12.8	22.8	13.9	20.0	27.4	27.5	14.7	20.8	27.8
Moderately high	45.0	40.4	37.5	41.4	40.1	41.2	29.4	34.0	34.3	28.1	27.7	24.3	15.5	31.8	27.5	19.5	36.9	14.2	27.9	29.0	34.0	23.4	43.0	26.0	38.3	30.2	31.6
Very high	38.5	27.5	26.0	24.8	17.5	18.2	14.5	17.7	16.0	12.5	10.4	18.8	17.8	16.6	15.6	15.3	12.1	12.1	16.3	14.8	25.5	20.9	11.8	24.1	22.3	20.4	21.9
Approx. N =	*78*	*130*	*124*	*179*	*156*	*165*	*182*	*116*	*94*	*125*	*126*	*104*	*112*	*84*	*66*	*71*	*46*	*74*	*56*	*58*	*51*	*82*	*96*	*113*	*89*	*102*	*82*
% of All Respondents																											
No use in last 12 months	94.3	94.3	93.6	94.0	94.9	94.5	94.4	96.5	97.0	95.9	95.9	96.4	96.4	97.3	97.5	—	98.1	97.1	97.8	97.7	97.9	96.4	96.0	95.3	95.9	94.9	95.9
I don't take them to get high	0.2	0.4	0.5	0.6	0.5	0.5	0.8	0.6	0.7	0.9	0.9	0.7	1.0	0.7	0.7	—	0.4	0.8	0.6	0.5	0.3	0.8	0.5	0.6	0.6	1.0	0.8
Not at all high	0.2	0.3	0.2	0.4	0.4	0.6	0.6	0.1	0.3	0.3	0.5	0.4	0.7	0.2	0.3	—	0.2	0.8	0.4	0.3	0.3	0.4	0.2	0.5	0.4	0.5	0.0
A little high	0.5	1.0	1.7	1.1	1.2	1.2	1.7	0.9	0.5	1.2	1.2	0.9	0.7	0.5	0.4	—	0.4	0.6	0.3	0.5	0.3	0.7	1.1	1.3	0.6	1.1	1.1
Moderately high	2.6	2.3	2.4	2.5	2.1	2.3	1.6	1.2	1.0	1.2	1.1	0.9	0.6	0.8	0.7	—	0.7	0.4	0.6	0.7	0.7	0.9	1.7	1.2	1.6	1.5	1.3
Very high	2.2	1.6	1.7	1.5	0.9	1.0	0.8	0.6	0.5	0.5	0.4	0.7	0.6	0.4	0.4	—	0.2	0.4	0.4	0.3	0.5	0.8	0.5	1.1	0.9	1.0	0.9
Approx. N =	*1368*	*2281*	*1938*	*2983*	*3045*	*2983*	*3277*	*3353*	*3115*	*3048*	*3065*	*2911*	*3091*	*3144*	*2655*	—	*2410*	*2538*	*2553*	*2492*	*2442*	*2261*	*2407*	*2409*	*2167*	*2001*	*1996*
*Q. When you take opiates other than heroin how long do you usually stay high?*ᵃ																											
% of Recent Users																											
Usually don't get high	6.8	15.4	7.4	24.6	17.8	15.7	24.2	17.0	23.9	23.2	25.1	24.7	41.4	23.7	38.8	38.5	31.3	36.8	36.3	31.7	22.4	27.8	20.6	18.8	21.5	23.1	15.2
One to two hours	8.8	16.7	32.5	19.3	24.6	29.5	30.4	36.4	26.7	29.3	30.9	30.9	25.9	26.6	18.2	24.0	23.0	26.7	18.1	31.6	23.8	22.7	35.7	26.1	30.1	25.9	36.7
Three to six hours	56.5	44.1	46.2	50.2	44.3	42.1	33.2	34.0	38.6	38.1	29.9	35.3	24.9	41.4	22.6	29.1	38.2	26.0	29.9	35.2	36.2	32.5	36.1	37.8	29.2	42.9	40.2
Seven to 24 hours	24.5	20.5	11.1	15.9	12.1	12.4	9.8	12.0	8.4	8.8	13.3	9.2	5.8	7.5	15.6	5.7	7.5	5.6	13.0	0.7	15.4	14.2	7.6	14.4	17.4	3.9	7.8
More than 24 hours	3.4	3.2	2.8	0.0	1.2	0.2	2.3	0.6	2.4	0.6	0.8	0.0	2.0	0.8	4.8	2.7	0.0	5.0	2.7	0.9	2.3	2.7	0.0	2.9	1.7	4.2	0.0
Approx. N =	*78*	*130*	*124*	*173*	*151*	*164*	*180*	*116*	*94*	*121*	*128*	*102*	*112*	*79*	*65*	*69*	*49*	*76*	*57*	*60*	*49*	*82*	*96*	*111*	*89*	*97*	*84*
% of All Respondents																											
No use in last 12 months	94.3	94.3	93.6	94.0	95.0	94.5	94.5	96.5	97.0	96.0	95.8	96.5	96.4	97.5	97.5	—	98.0	97.0	97.8	97.6	98.0	96.4	96.0	95.4	95.9	95.1	95.8
Usually don't get high	0.4	0.9	0.5	0.9	0.9	0.9	1.3	0.6	0.7	0.9	1.0	0.9	1.5	0.6	1.0	—	0.6	1.1	0.8	0.8	0.5	1.0	0.8	0.9	0.9	1.1	0.6
One to two hours	0.5	1.0	2.1	1.2	1.2	1.6	1.7	1.3	0.8	1.2	1.3	1.1	0.9	0.7	0.4	—	0.5	0.8	0.4	0.8	0.5	0.8	1.4	1.2	1.2	1.3	1.5
Three to six hours	3.2	2.5	3.0	3.0	2.2	2.3	1.8	1.2	1.2	1.5	1.2	1.2	0.9	1.0	0.6	—	0.8	0.8	0.7	0.8	0.7	1.2	1.4	1.7	1.2	2.1	1.7
Seven to 24 hours	1.4	1.2	0.7	1.0	0.6	0.7	0.5	0.4	0.3	0.3	0.6	0.3	0.2	0.2	0.4	—	0.2	0.2	0.3	0.0	0.3	0.5	0.3	0.7	0.7	0.2	0.3
More than 24 hours	0.2	0.2	0.2	0.0	0.1	0.0	0.1	0.0	0.1	0.0	0.0	0.0	0.1	0.0	0.1	—	0.0	0.1	0.1	0.0	0.0	0.1	0.0	0.1	0.1	0.2	0.0
Approx. N =	*1368*	*2281*	*1938*	*2883*	*3040*	*2982*	*3275*	*3353*	*3116*	*3043*	*3067*	*2908*	*3092*	*3139*	*2654*	—	*2413*	*2540*	*2554*	*2493*	*2441*	*2261*	*2407*	*2406*	*2167*	*1996*	*1998*

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

ᵃThese questions appear in just one form. They are asked only of respondents who report use of the drug in the prior twelve months (i.e., "recent users").

TABLE 7-6
Amphetamines: Trends in Degree and Duration of Feeling High for Twelfth Graders

Q. *When you take amphetamines how high do you usually get?*ᵃ	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
% of Recent Users																											
I don't take them to get high	9.3	10.7	15.1	14.7	16.8	17.1	20.2	21.0	24.2	22.8	20.4	18.7	20.7	23.9	19.3	15.8	24.7	15.8	18.6	19.9	16.1	30.6	18.1	18.9	19.6	17.3	22.4
Not at all high	4.6	5.0	7.5	6.2	7.7	8.9	11.5	9.1	11.9	9.3	12.8	10.8	12.2	14.2	14.0	18.8	10.8	19.2	20.5	12.0	17.0	9.3	16.0	12.4	12.9	11.4	11.8
A little high	26.4	26.1	24.0	25.9	26.5	34.0	31.4	36.8	33.0	34.8	36.7	42.6	40.0	29.1	30.8	30.0	35.5	28.6	30.6	29.1	27.5	25.4	27.3	27.3	26.9	23.5	15.9
Moderately high	44.6	43.8	39.2	40.2	36.4	30.8	30.6	28.5	27.0	29.5	24.9	23.3	20.6	24.8	24.4	24.9	16.8	23.0	19.9	26.8	28.1	18.3	23.2	25.1	25.9	28.2	27.4
Very high	15.1	14.4	14.1	13.0	12.6	9.3	6.3	4.6	3.9	3.5	5.2	4.6	6.6	8.0	11.5	10.5	12.1	13.4	10.3	12.2	11.3	16.4	15.3	16.3	14.6	19.6	22.5
Approx. N =	*410*	*406*	*449*	*542*	*507*	*575*	*788*	*622*	*463*	*418*	*380*	*305*	*265*	*196*	*153*	*131*	*107*	*105*	*127*	*144*	*145*	*138*	*183*	*198*	*141*	*126*	*145*
% of All Respondents																											
No use in last 12 months	83.8	84.2	83.7	82.9	83.6	81.2	76.5	82.0	85.6	86.7	87.9	89.8	91.7	93.9	94.4	—	95.7	96.0	95.2	94.3	94.2	94.0	92.6	92.0	93.7	93.9	92.9
I don't take them to get high	1.5	1.7	2.5	2.5	2.8	3.2	4.8	3.8	3.5	3.0	2.5	1.9	1.7	1.5	1.1	—	1.1	0.6	0.9	1.1	0.9	1.8	1.3	1.5	1.2	1.1	1.6
Not at all high	0.7	0.8	1.2	1.1	1.3	1.7	2.7	1.6	1.7	1.2	1.6	1.1	1.0	0.9	0.8	—	0.5	0.8	1.0	0.7	1.0	0.6	1.2	1.0	0.8	0.7	0.8
A little high	4.3	4.1	3.9	4.4	4.3	6.4	7.4	6.6	4.8	4.6	4.5	4.3	3.3	1.8	1.7	—	1.5	1.1	1.5	1.7	1.6	1.5	2.0	2.2	1.7	1.4	1.1
Moderately high	7.2	6.9	6.4	6.9	6.0	5.8	7.2	5.1	3.9	3.9	3.0	2.4	1.7	1.5	1.4	—	0.7	0.9	1.0	1.5	1.6	1.1	1.7	2.0	1.6	1.7	1.9
Very high	2.4	2.3	2.3	2.2	2.1	1.7	1.5	0.8	0.6	0.5	0.6	0.5	0.5	0.5	0.6	—	0.5	0.5	0.5	0.7	0.6	1.0	1.1	1.3	0.9	1.2	1.6
Approx. N =	*2531*	*2570*	*2755*	*3170*	*3098*	*3055*	*3354*	*3455*	*3211*	*3129*	*3131*	*2994*	*3170*	*3217*	*2741*	—	*2473*	*2609*	*2634*	*2538*	*2514*	*2300*	*2490*	*2482*	*2233*	*2058*	*2053*
Q. *When you take amphetamines how long do you usually stay high?*ᵃ																											
% of Recent Users																											
Usually don't get high	10.7	11.2	11.9	14.5	15.4	17.9	24.4	17.5	22.7	25.3	26.1	21.3	24.4	29.3	25.3	30.0	38.8	31.3	33.7	34.6	27.9	32.7	29.0	23.1	21.7	24.1	30.1
One to two hours	11.4	12.1	15.3	17.0	18.7	19.9	20.3	25.2	23.2	27.0	31.4	36.8	37.4	30.4	36.9	33.2	23.4	32.2	31.5	28.7	23.8	25.1	26.7	26.5	29.0	26.9	27.8
Three to six hours	37.0	48.4	38.4	39.5	40.1	43.4	38.2	45.5	42.6	35.7	31.2	31.0	23.3	26.0	26.5	22.5	19.0	11.0	25.0	20.7	29.7	27.2	29.8	28.0	37.5	34.2	23.9
Seven to 24 hours	37.0	26.1	31.6	27.1	23.8	17.7	16.3	11.0	9.7	11.9	10.8	10.1	12.9	13.1	7.2	12.9	12.8	18.1	6.9	10.7	13.6	11.6	12.6	16.9	8.6	14.2	17.0
More than 24 hours	3.8	2.1	2.9	1.9	2.0	1.1	0.8	0.8	1.8	0.2	0.6	0.8	2.0	1.1	4.2	1.4	6.0	7.5	3.0	5.3	4.9	3.4	1.9	5.5	3.2	0.6	1.1
Approx. N =	*412*	*413*	*446*	*546*	*521*	*583*	*810*	*627*	*478*	*424*	*392*	*309*	*267*	*202*	*154*	*131*	*109*	*102*	*125*	*146*	*147*	*136*	*178*	*195*	*134*	*123*	*143*
% of All Respondents																											
No use in last 12 months	83.8	84.2	83.7	82.9	83.3	81.0	76.0	81.9	85.2	86.5	87.5	89.7	91.6	93.7	94.4	—	95.6	96.1	95.3	94.3	94.2	94.1	92.8	92.1	94.0	94.0	93.0
Usually don't get high	1.7	1.8	1.9	2.5	2.6	3.4	5.8	3.2	3.4	3.4	3.3	2.2	2.0	1.8	1.4	—	1.7	1.2	1.6	2.0	1.6	1.9	2.1	1.8	1.3	1.4	2.1
One to two hours	1.8	1.9	2.5	2.9	3.1	3.8	4.9	4.6	3.4	3.7	3.9	3.8	3.1	1.9	2.1	—	1.0	1.3	1.5	1.6	1.4	1.5	1.9	2.1	1.7	1.6	1.9
Three to six hours	6.0	7.6	6.3	6.7	6.7	8.3	9.2	8.2	6.3	4.8	3.9	3.2	2.0	1.6	1.5	—	0.8	0.4	1.2	1.2	1.7	1.6	2.1	2.2	2.3	2.0	1.7
Seven to 24 hours	6.0	4.1	5.1	4.6	4.0	3.4	3.9	2.0	1.4	1.6	1.3	1.0	1.1	0.8	0.4	—	0.6	0.7	0.3	0.6	0.8	0.7	0.9	1.3	0.5	0.9	1.2
More than 24 hours	0.6	0.3	0.5	0.3	0.3	0.2	0.2	0.2	0.3	0.0	0.1	0.1	0.2	0.1	0.2	—	0.3	0.3	0.1	0.3	0.3	0.2	0.1	0.4	0.2	0.0	0.1
Approx. N =	*2543*	*2614*	*2736*	*3193*	*3111*	*3063*	*3375*	*3460*	*3227*	*3135*	*3142*	*2998*	*3172*	*3223*	*2742*	—	*2475*	*2607*	*2633*	*2539*	*2516*	*2298*	*2485*	*2479*	*2226*	*2055*	*2051*

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

ᵃThese questions appear in just one form. They are asked only of respondents who report use of the drug in the prior twelve months (i.e., "recent users").

TABLE 7-7
Tranquilizers: Trends in Degree and Duration of Feeling High for Twelfth Graders

Q. *When you take tranquilizers how high do you usuallyget?**	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
% of Recent Users																											
I don't take them to get high	17.9	18.5	23.6	23.0	16.8	14.7	19.1	25.3	20.2	24.3	21.7	30.7	30.4	42.7	34.8	34.5	48.3	31.0	29.0	30.5	26.6	18.3	19.3	19.6	11.3	9.4	20.1
Not at all high	11.1	16.2	12.4	14.0	15.0	17.6	17.0	17.3	17.1	16.7	17.6	24.0	20.8	12.9	22.6	11.5	13.9	18.6	29.5	19.2	18.6	9.4	13.4	8.0	7.9	10.9	11.8
A little high	30.1	24.1	29.5	27.0	27.0	27.5	28.7	30.0	27.7	29.9	37.5	19.2	18.4	22.4	16.6	26.1	19.7	16.1	19.0	22.0	18.9	34.0	25.2	24.9	22.1	35.2	21.4
Moderately high	28.9	31.4	25.8	29.1	30.5	29.8	22.9	18.5	26.0	21.4	19.8	17.3	18.2	14.1	21.5	18.2	17.3	21.2	14.6	24.4	24.0	28.1	23.9	37.9	39.7	33.7	29.4
Very high	11.9	9.8	8.7	6.8	10.8	10.5	12.4	8.8	9.0	7.7	3.4	8.9	12.2	7.9	4.5	9.7	0.8	13.2	7.8	4.0	11.8	10.2	18.2	9.5	19.1	10.9	17.3
Approx. N =	*159*	*213*	*243*	*267*	*218*	*205*	*223*	*154*	*128*	*115*	*144*	*122*	*125*	*99*	*68*	*75*	*51*	*57*	*68*	*58*	*67*	*54*	*83*	*80*	*77*	*69*	*95*
% of All Respondents																											
No use in last 12 months	89.4	89.7	89.2	90.1	92.9	93.2	93.3	95.5	96.0	96.3	95.4	95.9	96.0	96.9	97.5	—	97.9	97.8	97.4	97.7	97.3	97.6	96.6	96.8	96.5	96.6	95.3
I don't take them to get high	1.9	1.9	2.5	2.3	1.2	1.0	1.3	1.1	0.8	0.9	1.0	1.3	1.2	1.3	0.9	—	1.0	0.7	0.8	0.7	0.7	0.4	0.6	0.6	0.4	0.3	0.9
Not at all high	1.2	1.7	1.3	1.4	1.1	1.2	1.1	0.8	0.7	0.6	0.8	1.0	0.8	0.4	0.6	—	0.3	0.4	0.8	0.4	0.5	0.2	0.5	0.3	0.3	0.4	0.6
A little high	3.2	2.5	3.2	2.7	1.9	1.9	1.9	1.4	1.1	1.1	1.7	0.8	0.7	0.7	0.4	—	0.4	0.4	0.5	0.5	0.5	0.8	0.9	0.8	0.8	1.2	1.0
Moderately high	3.1	3.2	2.8	2.9	2.2	2.0	1.5	0.8	1.0	0.8	0.9	0.7	0.7	0.4	0.5	—	0.4	0.5	0.4	0.6	0.6	0.7	0.8	1.2	1.4	1.1	1.4
Very high	1.3	1.0	0.9	0.7	0.8	0.7	0.8	0.4	0.4	0.3	0.2	0.4	0.5	0.2	0.1	—	0.0	0.3	0.2	0.1	0.3	0.2	0.6	0.3	0.7	0.4	0.8
Approx. N =	*1500*	*2068*	*2250*	*2697*	*3073*	*3040*	*3330*	*3420*	*3186*	*3074*	*3119*	*2963*	*3141*	*3199*	*2710*	—	*2448*	*2571*	*2598*	*2523*	*2500*	*2292*	*2469*	*2468*	*2205*	*2046*	*2033*
Q. *When you take tranquilizers how long do you usually stay high?**																											
% of Recent Users																											
Usually don't get high	29.9	33.0	31.6	32.7	27.8	27.9	31.1	31.9	38.8	36.9	36.8	46.0	50.4	48.3	45.3	35.8	47.2	48.7	50.2	43.6	34.0	30.6	22.1	25.1	11.5	13.4	25.2
One to two hours	17.6	24.1	22.5	26.0	21.3	25.4	27.2	25.0	21.6	25.7	24.7	25.3	20.0	19.3	19.9	20.7	20.5	19.1	19.1	18.7	25.4	22.6	35.2	31.4	36.4	34.3	19.0
Three to six hours	42.9	35.6	38.8	32.3	40.2	32.4	32.1	33.3	32.5	27.8	33.5	22.4	21.8	23.7	28.5	31.1	25.0	18.9	19.1	31.3	28.5	32.7	35.7	36.0	41.9	45.8	38.6
Seven to 24 hours	9.5	6.5	6.1	8.7	9.4	14.2	9.5	9.8	6.3	9.5	3.5	4.4	7.3	8.0	3.0	9.7	5.6	12.2	11.6	3.0	8.9	11.5	6.1	4.7	9.0	4.6	11.0
More than 24 hours	0.0	0.7	1.0	0.4	1.3	0.0	0.0	0.0	0.8	0.0	1.6	1.9	0.4	0.8	3.3	2.8	1.6	1.2	0.0	3.5	3.2	2.6	1.0	2.9	1.3	1.9	6.3
Approx. N =	*158*	*214*	*242*	*269*	*221*	*200*	*221*	*151*	*132*	*114*	*134*	*121*	*129*	*95*	*65*	*67*	*48*	*55*	*72*	*51*	*62*	*54*	*79*	*81*	*74*	*70*	*95*
% of All Respondents																											
No use in last 12 months	89.4	89.7	89.2	90.1	92.8	93.4	93.4	95.6	95.9	96.3	95.7	95.9	95.9	97.0	97.6	—	98.0	97.9	97.2	98.0	97.5	97.7	96.8	96.7	96.6	96.6	95.3
Usually don't get high	3.2	3.4	3.4	3.2	2.0	1.8	2.1	1.4	1.6	1.4	1.6	1.9	2.1	1.4	1.1	—	0.9	1.0	1.4	0.9	0.8	0.7	0.7	0.8	0.4	0.5	1.2
One to two hours	1.9	2.5	2.4	2.6	1.5	1.7	1.8	1.1	0.9	1.0	1.1	1.0	0.8	0.6	0.5	—	0.4	0.4	0.5	0.4	0.6	0.5	1.1	1.0	1.2	1.2	0.9
Three to six hours	4.5	3.7	4.2	3.2	2.9	2.1	2.1	1.5	1.3	1.0	1.4	0.9	0.9	0.7	0.7	—	0.5	0.4	0.5	0.6	0.7	0.8	1.1	1.2	1.4	1.6	1.8
Seven to 24 hours	1.0	0.7	0.7	0.9	0.7	0.9	0.6	0.4	0.3	0.4	0.1	0.2	0.3	0.2	0.1	—	0.1	0.3	0.3	0.1	0.2	0.3	0.2	0.2	0.3	0.2	0.5
More than 24 hours	0.0	0.1	0.1	0.0	0.1	0.0	0.0	0.0	0.0	0.0	0.1	0.1	0.0	0.0	0.1	—	0.0	0.0	0.0	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.3
Approx. N =	*1491*	*2078*	*2241*	*2717*	*3075*	*3034*	*3328*	*3417*	*3190*	*3072*	*3110*	*2962*	*3144*	*3196*	*2707*	—	*2446*	*2570*	*2602*	*2516*	*2495*	*2291*	*2465*	*2468*	*2202*	*2047*	*2032*

NOTE: '—' indicates data not available.
SOURCE: The Monitoring the Future Study, the University of Michigan.

*These questions appear in just one form. They are asked only of respondents who report use of the drug in the prior twelve months (i.e., "recent users").

TABLE 7-8

Alcohol: Trends in Degree and Duration of Feeling High for Twelfth Graders

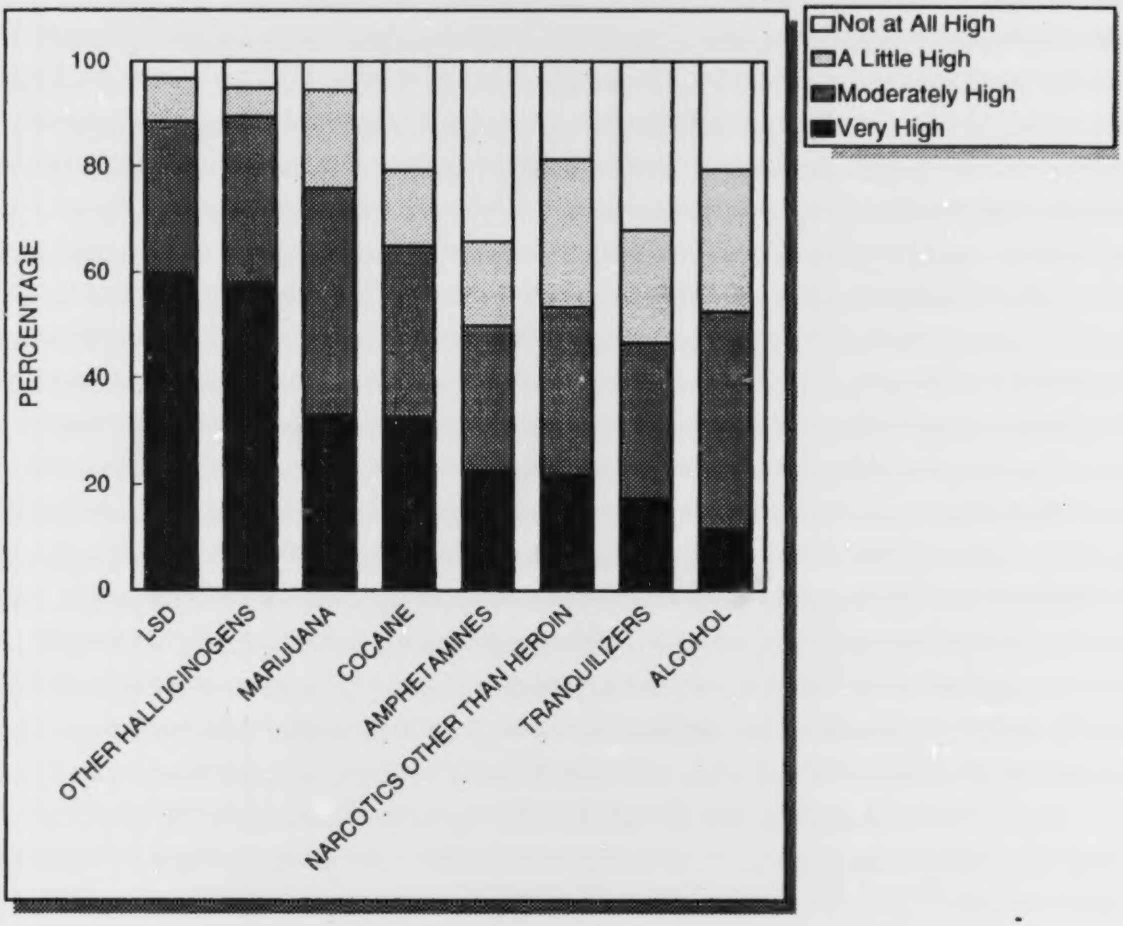
Q. When you drink alcoholic beverages how high do you usually get?[*]	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
% of Recent Users																											
Not at all high	23.6	21.6	20.6	19.1	19.6	20.7	18.9	18.9	18.8	19.0	19.7	18.5	18.8	20.0	22.1	23.0	20.6	24.2	23.8	19.7	20.7	23.2	22.0	20.6	21.1	22.4	20.5
A little high	33.8	32.3	32.8	33.9	33.6	32.6	33.8	32.6	35.8	34.0	34.8	34.7	34.4	34.2	34.4	32.3	36.8	32.5	32.2	32.7	32.6	29.9	28.9	29.8	27.3	26.1	26.7
Moderately high	35.9	38.0	39.6	39.9	38.7	39.7	41.4	40.9	38.8	39.2	38.5	39.8	38.8	38.2	35.9	36.2	34.0	35.6	36.5	38.3	36.5	35.5	37.5	37.5	41.7	38.8	40.9
Very high	6.6	8.1	7.0	7.1	8.1	7.0	5.8	7.5	6.7	7.8	7.1	7.1	8.0	7.6	7.6	8.5	8.6	7.7	7.5	9.2	10.1	11.4	11.6	12.1	10.0	12.7	11.8
Approx. N =	*2419*	*2368*	*2578*	*3124*	*2764*	*2709*	*2912*	*2958*	*2808*	*2601*	*2618*	*2531*	*2718*	*2755*	*2211*	*1965*	*1898*	*1965*	*1960*	*1866*	*1867*	*1664*	*1915*	*1874*	*1619*	*1567*	*1591*
% of All Respondents																											
No use in last 12 months	15.2	14.3	13.0	12.3	12.5	13.2	14.7	14.1	14.1	17.1	16.1	16.0	14.6	14.8	18.8	21.2	22.7	23.6	25.4	26.4	25.7	28.2	24.7	25.6	27.0	26.2	24.2
Not at all high	20.0	18.5	17.9	16.8	17.2	18.0	16.2	16.2	16.2	15.8	16.5	15.5	16.0	17.0	18.0	18.1	15.9	18.5	17.8	14.5	15.4	16.6	16.6	15.3	15.4	16.6	15.6
A little high	28.7	27.7	28.5	29.7	29.4	28.3	28.9	28.0	30.7	28.2	29.2	29.1	29.4	29.2	28.0	25.5	28.5	24.8	24.0	24.1	24.2	21.5	21.8	22.2	19.9	19.3	20.2
Moderately high	30.4	32.6	34.5	35.0	33.8	34.4	35.3	35.2	33.3	32.5	32.3	33.4	33.1	32.6	29.2	28.5	26.3	27.2	27.2	28.2	27.1	25.5	28.2	27.9	30.5	28.6	31.0
Very high	5.6	6.9	6.1	6.2	7.1	6.1	5.0	6.5	5.7	6.5	5.9	6.0	6.8	6.5	6.1	6.7	6.7	5.9	5.6	6.8	7.5	8.2	8.7	9.0	7.3	9.4	9.0
Approx. N =	*2853*	*2763*	*2963*	*3562*	*3159*	*3122*	*3413*	*3443*	*3268*	*3137*	*3120*	*3011*	*3183*	*3232*	*2721*	*2493*	*2454*	*2572*	*2627*	*2533*	*2514*	*2318*	*2542*	*2517*	*2217*	*2123*	*2099*
Q. When you drink alcoholic beverages how long do you usually stay high?[*]																											
% of Recent Users																											
Usually don't get high	25.7	24.6	22.6	21.3	21.7	22.7	20.9	20.5	21.4	20.3	21.5	20.9	20.8	22.9	24.2	24.7	23.0	27.0	26.1	22.5	23.2	25.3	23.5	22.6	22.5	24.6	21.5
One to two hours	40.5	38.5	38.8	39.8	41.9	39.5	40.3	41.3	40.8	42.2	41.5	40.6	43.8	42.0	41.3	39.4	40.1	37.3	38.8	40.5	36.7	33.1	33.6	36.8	32.3	32.2	33.7
Three to six hours	30.1	33.8	34.8	35.7	32.7	33.8	35.6	34.4	33.7	33.1	33.5	34.9	31.5	32.1	31.6	31.7	31.7	30.7	30.4	32.2	34.2	35.7	36.9	34.5	39.6	37.0	38.5
Seven to 24 hours	3.4	3.0	3.5	3.1	3.4	3.8	3.1	3.4	3.9	4.0	3.1	3.2	3.7	2.9	2.8	4.0	4.6	4.7	4.3	4.2	5.4	5.3	5.2	5.7	5.1	5.4	5.6
More than 24 hours	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.4	0.3	0.3	0.4	0.4	0.2	0.1	0.2	0.3	0.6	0.3	0.3	0.6	0.6	0.5	0.9	0.5	0.5	0.9	0.7
Approx. N =	*2403*	*2358*	*2547*	*3098*	*2746*	*2697*	*2892*	*2947*	*2792*	*2588*	*2608*	*2509*	*2711*	*2748*	*2202*	*1949*	*1884*	*1951*	*1950*	*1857*	*1849*	*1657*	*1897*	*1853*	*1614*	*1552*	*1586*
% of All Respondents																											
No use in last 12 months	15.2	14.3	13.0	12.3	12.6	13.3	14.8	14.1	14.1	17.1	16.1	16.1	14.7	14.8	18.8	21.3	22.8	23.7	25.5	26.4	25.9	28.3	24.8	25.8	27.0	26.4	24.3
Usually don't get high	21.8	21.1	19.7	18.7	19.0	19.7	17.8	17.6	18.3	16.9	18.0	17.5	17.8	19.5	19.6	19.4	17.8	20.6	19.5	16.5	17.2	18.2	17.6	16.8	16.4	18.1	16.3
One to two hours	34.3	33.0	33.8	34.9	36.6	34.2	34.3	35.5	35.0	35.0	34.8	34.1	37.4	35.8	33.5	31.0	31.0	28.5	28.9	29.8	27.2	23.7	25.3	27.3	23.6	23.7	25.5
Three to six hours	25.5	29.0	30.3	31.3	28.6	29.3	30.4	29.6	28.9	27.4	28.1	29.3	26.9	27.3	25.6	24.9	24.4	23.4	22.7	23.7	25.3	25.6	27.7	25.6	28.9	27.2	29.2
Seven to 24 hours	2.9	2.6	3.0	2.7	3.0	3.3	2.7	2.9	3.3	3.4	2.6	2.7	3.2	2.5	2.2	3.2	3.5	3.6	3.2	3.1	4.0	3.8	3.9	4.2	3.7	3.9	4.2
More than 24 hours	0.2	0.2	0.3	0.1	0.2	0.2	0.1	0.3	0.2	0.2	0.3	0.4	0.2	0.1	0.2	0.2	0.5	0.2	0.2	0.4	0.4	0.4	0.7	0.4	0.4	0.7	0.5
Approx. N =	*2834*	*2751*	*2928*	*3532*	*3142*	*3109*	*3393*	*3431*	*3252*	*3124*	*3110*	*2990*	*3177*	*3226*	*2712*	*2477*	*2441*	*2558*	*2616*	*2525*	*2496*	*2311*	*2524*	*2497*	*2211*	*2108*	*2095*

SOURCE: The Monitoring the Future Study, the University of Michigan.

[*] These questions appear in just one form. They are asked only of respondents who report use of the drug in the prior twelve months (i.e., "recent users").

FIGURE 7-1

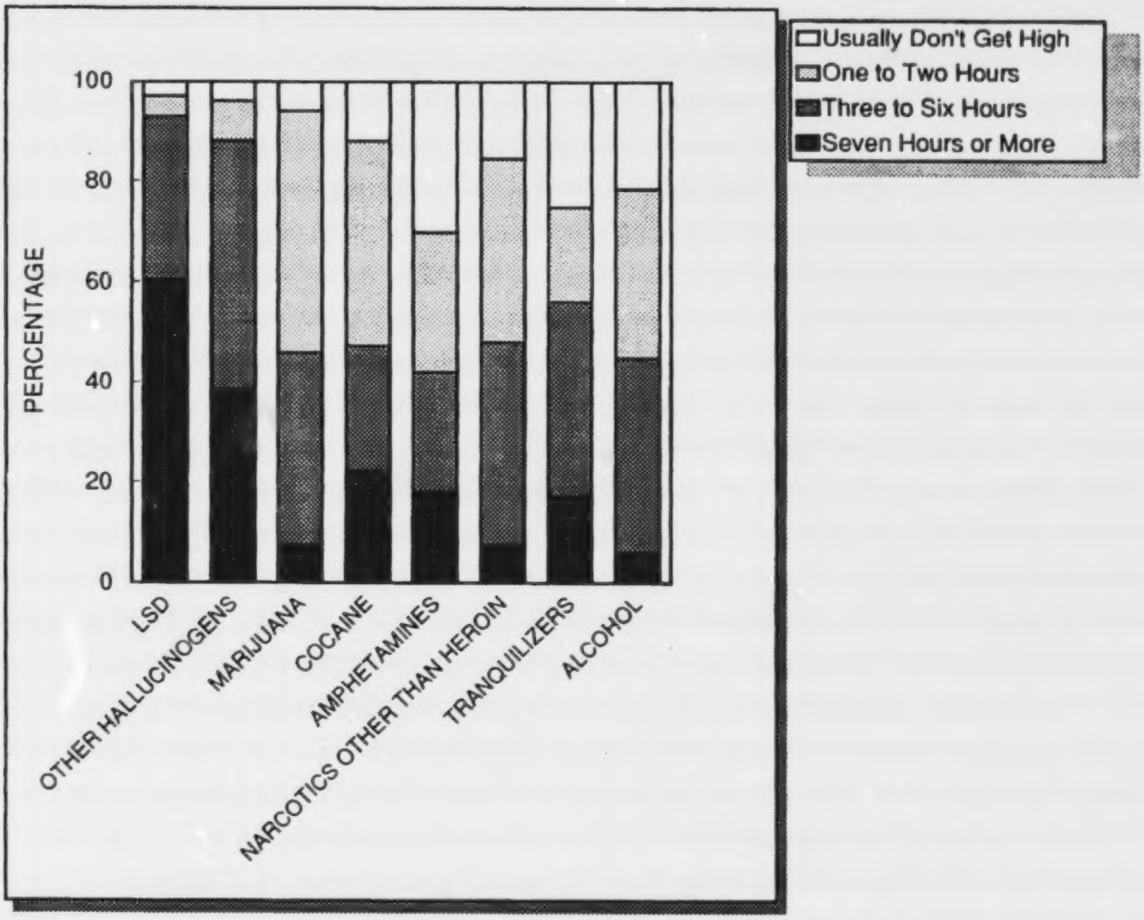
Degree of Drug Highs Attained by Recent Users
Twelfth Graders, 2001



NOTE: Data are based on answers from respondents reporting any use of the drug in the prior twelve months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

FIGURE 7-2

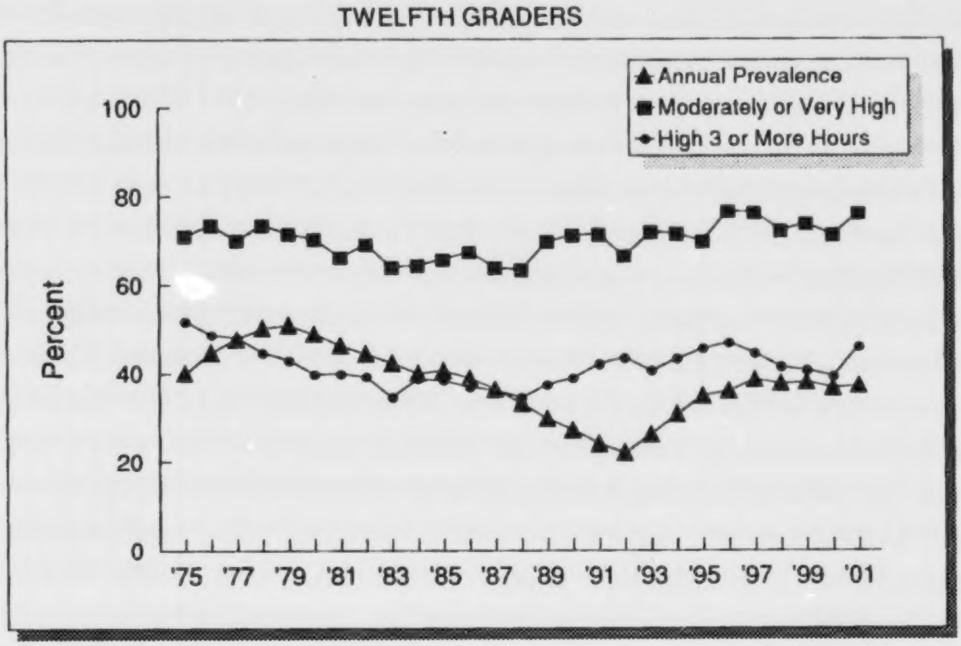
Duration of Drug Highs Attained by Recent Users
Twelfth Graders, 2001



NOTE: Data are based on answers from respondents reporting any use of the drug in the prior twelve months. Heroin is not included in this figure because these particular questions are not asked of the small number of heroin users.

FIGURE 7-3

Trends in Annual Prevalence of Marijuana, Percent of Recent Users Getting Moderately or Very High, and Percent of Recent Users Staying High Three or More Hours for Twelfth Graders



Chapter 8

ATTITUDES AND BELIEFS ABOUT DRUG USE

One of the most important theoretical contributions of this study to our general understanding of the drug phenomenon has been to demonstrate the importance of beliefs and attitudes about drugs as determinants of both the initiation and non-continuation of use. When Monitoring the Future was launched in 1975, we allocated a considerable amount of questionnaire content to the measurement of certain attitudes and beliefs related to drug use—ones that we believed might prove important in explaining young people's use of drugs. Over the years, this investment has yielded great dividends.

In this section we present the cross-time results for three of these important sets of attitude and belief questions. One set concerns students' beliefs about how *harmful* the various kinds of drug use are for the user; the second concerns the degree to which students personally *disapprove* of various kinds of drug use; and the third, asked only of seniors, deals with their attitudes about various forms of *legal prohibition*. Chapter 9 presents results on the closely related topics of parents' and friends' attitudes about drugs, as students perceive them.

The data presented next show inverse relationships in any given year, at the aggregate level, between (a) the level of reported use of a drug and (b) the level of perceived risk and disapproval of using that drug. For example, of the illicit drugs, marijuana has the highest level of use and one of the lowest levels of perceived risk and disapproval of use. These relationships suggest that individuals who believe that the use of a particular drug involves risk of harm and/or who disapprove of its use are less likely to use that drug. Individual-level analyses confirm this conclusion: strong correlations exist between individuals' use of drugs and their various attitudes and beliefs about using those drugs. Those seniors who use a given drug are less likely to disapprove of its use or to see its use as dangerous, and they are more likely to report less disapproval of its use by their own parents and friends.

Many of the attitudes and beliefs about drug use reported next have changed dramatically during the life of the study, as have actual drug-using behaviors. Beginning in 1979, scientists, policymakers and, in particular, the electronic and print media gave considerable attention to the increasing level of regular marijuana use among young people that was being documented by this study and to the potential hazards associated with such use. As discussed later in this chapter, seniors' attitudes and beliefs about the regular use of marijuana shifted in a more conservative direction after 1979—a shift that coincided with a reversal in the previous rapid rise of daily use and that very likely reflected the impact of the increased public attention. Between 1986 and 1987, a similar and even more dramatic shift occurred for cocaine use and continued for some years. During much of the 1990s, however, there was an important turnaround or "relapse" in these attitudes, accompanied by increased use of quite a number of the illicit drugs, in particular marijuana.

PERCEIVED HARMFULNESS OF DRUG USE

Beliefs About Harmfulness Among Twelfth Graders

- For many drugs, the level of risk attributed to use varies considerably with the level of use being considered. Expecting this to be the case, we structured the questions about illicit drugs to differentiate among "using once or twice," "using occasionally," and "using regularly." Questions about the harmfulness of licit drug use also specify levels of use.

- A substantial majority of high school seniors perceive that ***regular*** use of ***any of the illicit drugs*** entails a great risk of harm for the user. As Table 8-2 shows, between 84% and 90% of the seniors perceive a great risk of harm from regular use of ***cocaine***, ***crack***, ***cocaine powder***, and ***heroin***. Additionally, the proportions attributing great risk to regular use of ***LSD, amphetamines***, and ***barbiturates*** are 74%, 67%, and 50%, respectively.

- Regular use of ***marijuana*** is judged to involve a great risk to the user by 57% of the seniors.

- Nearly three-quarters of all seniors (73%) now judge smoking one or more packs of ***cigarettes*** per day as entailing a great risk of harm for the user.

- Regular use of ***alcohol*** is more explicitly defined in several questions providing specificity on the amount of use. More than one-fifth of seniors (23%) associate great risk of harm with having one or two drinks nearly every day, fewer than half (44%) think there is great risk involved in having five or more drinks once or twice each weekend, and fewer than two-thirds (61%) think the user takes a great risk in consuming four or five drinks nearly every day. It is noteworthy that more than one-third do not view even heavy daily drinking as entailing great risk.

- Far fewer respondents feel that a person runs a great risk of harm by trying a drug once or twice—what we refer to here as *experimental use*. Still, substantial proportions of high school seniors view even the experimental use of most of the illicit drugs as risky. The percentages associating great risk with experimental use rank as follows: 59% for ***steroids***, 56% for ***heroin***, 53% for ***ice***, 51% for ***cocaine***, 49% for ***crack***, 49% for ***cocaine powder***, 46% for ***PCP***, 46% for ***ecstasy***, 35% for ***amphetamines***, 33% for ***LSD***, and 26% for ***barbiturates***.

- By way of contrast, only 15% of seniors see experimenting with ***marijuana*** as entailing great risk.

- Just 9% of seniors believe there is much risk involved in trying an ***alcoholic beverage*** once or twice.

- Relatively few students see great risk in smoking one to five cigarettes per day: 31% of the eighth graders and 32% of the tenth graders. (Twelfth graders are not asked this question, which was recently introduced into the study, and there are no questions about experimenting with cigarettes.)

Beliefs About Harmfulness Among Eighth and Tenth Graders

An abbreviated set of the same questions on harmfulness has been asked of eighth and tenth graders since 1991. Questions were also added about the perceived harmfulness of using ***inhalants*** (see Table 8-1). Perceived risk questions about ***LSD*** use were added in 1993, and questions about ***ecstasy*** were added in 2001. Although the findings are quite similar to those for seniors in general, there are some interesting differences.

- The most important difference is observed for ***regular cigarette smoking***. Unfortunately, perceived risk is lowest at the ages when initiation is most likely to occur: while nearly three-quarters of seniors (73%) see great risk in smoking a pack a day or more, fewer (65%) of the tenth graders and only 57% of the eighth graders do.

- Regular use of ***smokeless tobacco*** is viewed as entailing great risk by about 38% of eighth graders, 46% of tenth graders, and 45% of twelfth graders. Again, because this behavior is often initiated at early ages, these figures are disturbingly low.

- In contrast to tobacco use, the younger students, particularly the eighth graders, are somewhat *more* likely than seniors to see ***marijuana*** use as dangerous.

- Tenth graders are most likely to see the use of ***cocaine powder*** and ***crack*** as dangerous. This unusual pattern has been replicated every year since 1991.

- Similarly, seeing the use of ***heroin*** (without using a needle) as dangerous is highest in tenth grade and has been since this question was added in 1995.

- Eighth- and tenth-grade students are slightly more likely than twelfth graders to see weekend ***binge drinking*** as dangerous: 56% for eighth graders, 51% for tenth graders, and 44% for twelfth graders. The younger students are also somewhat more likely to see ***daily drinking*** and experimentation as a bit more risky than do seniors.

- The pattern for ***ecstasy*** use is similar to that for cigarettes, with younger students seeing less risk in its use than the seniors: 36% of eighth graders and 39% of tenth graders see great risk in trying ecstasy compared to 46% of twelfth graders.

- Experimentation with ***inhalants*** is seen as dangerous by relatively low proportions of eighth and tenth graders (46% and 50%). (The question about risk is not asked of twelfth graders.)

TRENDS IN PERCEIVED HARMFULNESS OF DRUG USE

Trends in Perceived Harmfulness Among Twelfth Graders

Several very important trends in student beliefs about the dangers associated with using various drugs have occurred over the life of the study. (See Table 8-2 and Figures 8-1a through 8-11a.)

- Some of the most important trends have involved ***marijuana*** use. (See Figure 8-1a.) From the beginning of the study in 1975 through 1978, the degree of harmfulness perceived to be associated with all levels of marijuana use declined as use increased sharply. (See Figure 8-4.) In 1979, for the first time, the proportion of seniors seeing risk to the user increased. This increase in perceived risk preceded an appreciable downturn in use (which began a year later in 1980) and continued fairly steadily through 1991, as use fell dramatically. However, in 1992 perceived risk began to drop and, while use continued to fall that year, the drop in perceived risk presaged a sharp increase in use beginning in 1993. As Figures 8-1a and 8-4 illustrate, perceived risk continued to drop until 1997 and use continued to rise until 1997. We believe these changes in beliefs about the harmfulness of marijuana use played a critical role in causing both the downturn and the subsequent upturn in use. In both cases, the reversal in perceived risk preceded the reversal in actual use by a year, as we have documented in the present series of monographs. In 1997, the downturn in perceived risk ended, as did the increase in use. There has not been much change in either since.

- In the earlier years of this study, the most impressive increase (in absolute terms) in perceived risk occurred for ***regular marijuana use***. The proportion of seniors who viewed regular marijuana use as involving a great risk doubled in just seven years, from 35% to 70% between 1978 and 1985. Subsequently, the proportion increased more slowly, reaching 79% by 1991. The dramatic change between those years occurred during a period when a substantial amount of scientific and media attention was devoted to the potential dangers of heavy marijuana use. Young people also had ample opportunity for vicarious learning about the effects of heavy use through observation, because such use was widespread among their peers. (Recall that one in nine seniors was an active daily marijuana user in 1978.) Concerns about the harmfulness of occasional and experimental use also increased, and those increases were even larger in proportional terms, though not in absolute terms. For example, the proportion of seniors seeing great risk in ***trying marijuana*** rose from 8% in 1978 to 27% in 1991, and for ***occasional marijuana use*** it rose from 12% to 41% over the same interval.

There are several possible explanations for the turnaround and decline in perceived risk of marijuana use during the early 1990s. First, some of the forces that gave rise to the earlier increases in perceived risk became less influential: (1) because of lower use rates overall, fewer students had opportunities for vicarious learning by observing firsthand the effects of heavy marijuana use among their peers; (2) media coverage of the harmful effects of drug use, and of incidents resulting from drug use (particularly marijuana), decreased very substantially in the early 1990s (as has been documented by media surveys of national news programs); (3) media coverage of the anti-drug advertising campaign of the Partnership for a Drug-Free America also declined appreciably (as has been documented by both the Partnership and our own data from seniors on their levels of recalled exposure to such ads); and, (4) congressional funding for drug abuse prevention programs and curricula in the schools was cut appreciably in the early 1990s. In addition, forces encouraging use became more visible; in particular, a number of rap, grunge, and other rock groups started to sing the praises of using marijuana (and sometimes other drugs), perhaps influencing young people to think that using drugs might not be so dangerous after all. Finally, the drug experiences of many parents may have inhibited them from discussing drugs with their children and may have caused them uncertainty in knowing how to handle the apparent hypocrisy of telling their children not to do what they themselves did as teens. We believe that all of these factors may have contributed to the resurgence of marijuana use in the 1990s.

By the mid-1990s many of these sources of influence had reversed direction once again, laying the groundwork for an end to the rise in marijuana use (and illicit drug use more generally). First, because there was considerably more use among young people, and among many of their public role-model groups, the opportunity for vicarious learning by observing the consequences of use began to increase. And, as this study and others began to call the public's attention to the resurgence of the drug epidemic among youth, news stories on the subject increased substantially. Other institutions also changed their ways. The recording industry appeared to be producing fewer pro-drug lyrics and messages, in large part because of growing concern with overdose deaths among their artists. (A similar dynamic seems to have occurred in the fashion industry with the resulting demise of "heroin chic.") Various government initiatives to prevent drug use by young people were also launched, including the DHHS Secretary's Initiative to Prevent Marijuana Use. Federal funding for drug prevention in the schools also increased appreciably.

In addition, parents have been exhorted repeatedly in the last couple of years to discuss drugs with their children, and it appears from recent surveys that more of them have. Finally, in the late 1990s, a new federal media campaign involving paid advertising was initiated. Data from the present study indicate that the campaign is reaching large numbers of young people.[55]

- Trends in the perceived risk of regular marijuana use and in 30-day prevalence of use are combined in Figure 8-4 in order to illustrate more clearly their degree of covariance over time, which we interpret as reflecting a causal connection.[56] The trend line for the perceived availability of marijuana is included in Figure 8-4 to show its relative stability at a very high level and, thus, its inability to explain the substantial fluctuations in usage levels over the past 25 years.

  We have hypothesized that perceived risk operates not only directly on the individual's use but also indirectly through its impact on personal disapproval. In turn, personal disapproval operates directly on use and, in the collective, indirectly by influencing peer norms. Presumably there is some lag in these indirect effects: while perceived risk began to fall in 1992, personal disapproval did not begin to decline for experimental marijuana use until 1993, when it dropped sharply and use rose sharply. These shifts continued through 1997.

- A similar cross-time profile of attitudes has emerged for ***cocaine***. (See Figure 8-5.) First, the percentage who perceived great risk in ***trying cocaine*** once or twice dropped steadily from 43% to 31% between 1975 and 1980, a period of rapidly increasing use. However, rather than reversing sharply, as did perceived risk for marijuana use, perceived risk for experimental cocaine use moved rather little from 1980 to 1986, corresponding to a fairly stable period in actual use. Then, from 1986 to 1987, perceived risk for experimenting with cocaine did jump sharply from 34% to 48% in a single year, and in that year the first significant decline in use took place (see Figure 8-5). From 1987 to 1990, perceived risk continued to rise as use fell. Perceived risk peaked around 1990 or 1991 and then decreased slightly until 1995, when a significant decline in perceived risk of trying cocaine occurred. Perceived risk was stable between 1995 and 1998, and has declined slightly since then. Use increased through 1999, and has declined since.

- Trends in attitudes toward ***crack*** and ***cocaine powder*** use have been similar to those toward cocaine use. Crack use has shown the greatest recent decline in perceived risk, with the proportion of seniors reporting great risk associated with experimental use falling from 64% in 1990 to 48%-49% in 1999-2001. (We believe that some "generational forgetting" of the hazards of crack may be operating here.)

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[55] Johnston, L. D., O'Malley, P. M., &Terry-McElrath, Y. M. (2001, November). *Trends in recall and appraisal of anti-smoking advertising among American youth: Results from the Monitoring the Future surveys, 1997-2000.* Presentation at the National Conference on Tobacco OR Health, New Orleans, LA.

[56] We have addressed an alternate hypothesis that a general shift toward a more conservative lifestyle might have accounted for the shifts in both attitudes and behaviors. The empirical evidence tended to contradict that hypothesis. See Bachman, J. G., Johnston, L. D., O'Malley, P. M., & Humphrey, R. H. (1988). Explaining the recent decline in marijuana use: Differentiating the effects of perceived risks, disapproval, and general lifestyle factors. *Journal of Health and Social Behavior, 29*, 92-112. Johnston also showed that an increasing proportion of the quitters and abstainers from marijuana use reported concern over the physical and psychological consequences of use as reasons for their nonuse. See Johnston, L. D. (1982). A review and analysis of recent changes in marijuana use by American young people, in *Marijuana: The national impact on education* (pp. 8-13). New York: American Council on Marijuana. The role of perceived risk in the period of more recent increase in marijuana use is addressed in Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (1998). Explaining the recent increases in students' marijuana use: The impacts of perceived risks and disapproval from 1976 through 1996. *American Journal of Public Health, 88*, 887-892.

We believe these changes in beliefs had an important impact on behavior. As Figure 8-2a illustrates, perceived risk for ***regular cocaine use*** began to rise in the 1980s, increasing gradually from 69% in 1980 to 82% in 1986; however, that fairly substantial change did not translate into a change in actual behavior, and we believe the explanation is that very few high school seniors were regular users or ever expected to be. Thus, as we had predicted earlier, it was not until seniors' attitudes about behaviors they saw as relevant to themselves began to change (i.e., attitudes about experimental and occasional cocaine use) that the behaviors also began to shift.[57,58] Figure 8-5 shows trends in perceived risk, perceived availability, and actual use simultaneously—again, to illustrate that shifts in perceived risk could explain the downturn in use while shifts in availability could not.

We attribute changes in actual cocaine use between 1986 and 1991 to changes in risk associated with experimental and occasional use. We believe the changes in these attitudes resulted from three factors: (1) the greatly increased media coverage of cocaine use and its dangers that occurred in that interval (particularly in 1986), (2) an increasing number of anti-drug, and specifically anti-cocaine, "spots," and (3) the widely publicized 1986 deaths, attributed to cocaine use, of sports stars Len Bias and Don Rogers. The death of the sports stars, we believe, helped to bring home the notions, first, that no one—regardless of age or physical condition—is invulnerable to being killed by cocaine and, second, that one does not have to be an addict or regular user to suffer such adverse consequences. Finally, the addictive potential of cocaine also was emphasized heavily in the media during that period, in large part due to a media frenzy over crack use.

As with marijuana, 1991 saw an end to the increase in the perceived risk of cocaine use. Perceived risk began to fall after 1991, and a year later (after 1992) actual use began rising among seniors. (See Figure 8-5.) The significant reversal of trends in beliefs set the stage for a resurgence in use, particularly when combined with the fact that the proportions of students using two of the so-called "gateway drugs"—cigarettes and marijuana—also had been rising. Since 1992, the proportion of twelfth graders using cocaine in the prior 12 months rose

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[57] See also Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (1990). Explaining the recent decline in cocaine use among young adults: Further evidence that perceived risks and disapproval lead to reduced drug use. *Journal of Health and Social Behavior, 31*, 173-184. For a discussion of perceived risk in the larger set of factors influencing trends, and for a consideration of the forces likely to influence perceived risk, see also Johnston, L. D. (1991). Toward a theory of drug epidemics. In R. L. Donohew, H. Sypher, & W. Bukoski (Eds.), ***Persuasive communication and drug abuse prevention*** (pp. 93-131). Hillsdale, NJ: Lawrence Erlbaum.

[58] Our belief in the importance of perceived risk of experimental and occasional use of cocaine led us to include in 1986 for the first time the question about the dangers of occasional cocaine use. It was the very next year that proved to have a sharp rise on this measure.

steadily from 3.1% to 6.2% in 1999 before decreasing significantly to 5.0% in 2000 and to 4.8% in 2001. (The declines in seniors' cocaine use in 2000 and 2001 cannot be explained by any increase in perceived risk, raising the possibility that another drug may be substituting for cocaine—possibly **ecstasy**.)

Both crack and cocaine powder had been showing a similar rise in use during much of the 1990s, as well as a subsequent decline in 2000. As we shall see later, similar downturns in perceived risk occurred in the eighth and tenth grades through 1998, except that they started a year earlier among the eighth graders and resulted in larger changes in eighth and tenth grades than in twelfth grade. But as Figure 8-3a (bottom panel) illustrates, the decline in perceived risk of trying crack decelerated in eighth and tenth grades after 1995, and the perceived risk of trying powder cocaine showed a similar pattern (see Tables 8-1 and 8-2). By 2001, perceptions of risk are slightly lower than they were in 1995.

- For most of the ***illicit drugs other than marijuana and cocaine***, the period from 1975 (at the beginning of the study) to 1979 revealed a modest but consistent trend in the direction of fewer seniors associating much risk with experimental or occasional use of them. (See Table 8-2 and Figures 8-6a, 8-7a, and 8-8a.) This trend continued for ***amphetamines*** and ***barbiturates***, but not for other drugs, until about 1984.

  In the early 1980s, there was little change in perceived risk, although perceived risk of harm from experimental or occasional use of all the illicit drugs other than marijuana dropped slightly in 1985 and 1986. However, the perceived risk of experimental or occasional use of all drugs except PCP began to increase in 1987, reached a peak in 1990 or 1991, and then began to decline noticeably until about 1996.

- For ***heroin use***, perceived risk gradually declined between 1975 and 1986, even though use dropped and then stabilized in that interval. There was then an upward shift in 1987 (the same year in which there was a dramatic rise in perceived risk for cocaine) to a new level, where it held for four years. In 1992 risk dropped to a lower plateau again, a year or two before use started to rise. Perceived risk then rose again in the latter half of the 1990s, as use leveled off. As perceived risk fell, use by seniors rose, with annual prevalence of use increasing from 0.4% in 1991 to 1.1% by 1995. (Use also rose in the lower grades.) From 1995 through 1997 there was a slight increase in perceived risk at all three grades (see Tables 8-1 and 8-2 and Figure 8-8a) and usage rates rather stabilized. Perhaps not entirely coincidentally, the Partnership for a Drug-Free America launched a media campaign aimed at deglamorizing heroin in 1996. While the target audience was young adults, many secondary school students undoubtedly saw the ads as well. There has been little further change in perceived risk for heroin since 1997, except for a drop in 2000 at the twelfth grade, where there also was a significant increase in use, and a slight increase in perceived risk as use dropped significantly in 2001.

- In sum, between 1975 and 1978 (or 1979) there was a distinct decline among seniors in perceived harmfulness associated with use of all the illicit drugs. After 1978, concerns about regular ***marijuana*** use increased dramatically, and concerns about the use of marijuana at less frequent levels increased considerably. After 1986, there was a sharp increase in the risks associated with ***cocaine*** use—particularly at the experimental and occasional use levels—and some increase in perceived risk of use of virtually all the ***other illicit drugs*** (see Figures 8-6a, 8-7a, and 8-8a). Between 1991 and 1995, the trends reversed, with fewer seniors seeing use of these drugs as being dangerous. By 1996 and 1997, among seniors the decline in perceived risk of ***marijuana*** use had sharply decelerated (see Figure 8-1a); the decline in perceived risk of ***cocaine*** use had leveled (see Figure 8-2a); the decline in the perceived risk of ***LSD*** use had decelerated (see Figure 8-7a); and the perceived risk of using ***heroin*** was actually rising (see Figure 8-8a). Only for ***barbiturate*** use (asked only of seniors, see Figure 8-6a) was there any appreciable further decline in perceived risk. In 1998, perceived risk for a few drugs gave evidence of rising—***marijuana***, ***LSD***, and ***amphetamines*** (though the increases were not always statistically significant)—but in 1999 perceived risk declined some for these drugs and almost all others. In 2001, the only significant increase in perceived risk of illicit drug use was for ***ecstasy*** (MDMA), which rose from 38% in 2000 to 46% in 2001.

- The sharp decline in seniors' perceived risk of ***LSD*** use between 1991 and 1997 was particularly noteworthy, confirming our concern that attitudes and beliefs of the newer generation of young people may not have been influenced by some of the direct and vicarious learning experiences that helped to make their predecessors more cautious about its use (see Figure 8-7a). In the late 1960s and early 1970s, young people became aware of the risks of bad trips, uncontrollable flashbacks, dangerous behaviors under the influence, etc. Today's teenagers know much less about those risks. Fortunately, there has been a much more modest decline since 1995. (See Figure 8-7a and Table 8-2.) Despite the fact that perceived risk has been declining some in recent years, as has disapproval of LSD use, actual use has been falling. Obviously, this recent decline in use cannot be explained by a change in attitudes, thus raising the question of whether there has been any substitution from another drug. As it happens, another drug also used for its hallucinogenic properties, ***ecstasy***, has been in ascent and may have had some substitution effect.

- Perceived risk for ***ecstasy*** use was asked only of twelfth graders from 1997 to 2000; in 2001, it was added to the eighth and tenth grade questionnaires as well. Between 1997 and 2000, the percentage of twelfth graders seeing a great risk in trying ecstasy increased slightly from 34% to 38%, but in 2001 there was a significant increase of eight percentage points, up to 46%. As documented in the next chapter, there has been a dramatic rise in the availability of ecstasy to American teens in recent years, which may well help to explain its spread. Another belief—the perceived benefits of using a drug—is like perceived risk, almost surely a determinant of use. It is possible that there may have been a change in the perceived benefits of ecstasy use; but unfortunately, we do not measure this attitude. In any case, the significant increase in perceived risk in 2000 and 2001 is encouraging, because we believe it unlikely that the use of this drug will decline until more young people come to see its use as dangerous.

- The risks associated with experimental use of ***crystal methamphetamine*** (***ice***) fell from 62% in 1991 to 53% in 1998, as annual use rose from 1.4% to 3.0%. Perceived risk stabilized, and is still at 53% in 2001, while use had dropped slightly to 2.5%. The perceived risk of trying ***PCP***, though very high relative to other drugs in 1988, fell by 10 percentage points from its peak level of 59% in 1988 to 49% in 1995, continuing down to 46% in 2001 before stabilizing. Again, we suspect that teens in more recent classes are simply much less familiar with the drug and its considerable dangers compared to those who grew up in an earlier period. (Annual prevalence of use rose among seniors, from 1.4% in 1993 to 2.6% in 1996, as perceived risk declined; both risk and use have since declined [use in 2001 is at 1.8%].)

- After showing little systematic change in the latter half of the 1970s, the perceived risks associated with ***alcohol use*** at various levels rose during the 1980s (though not as dramatically as the perceived risks associated with marijuana and cocaine use) (see Figure 8-9a). The proportion perceiving great risk of harm in having one or two drinks nearly every day rose from 20% in 1980 to 33% in 1991 before it fell back to 23% by 2001, perhaps in part due to the publicity about the value of moderate alcohol consumption in protecting against heart disease. The proportion perceiving great risk in having four or five drinks nearly every day rose slightly from 65% in 1981 to 71% in 1990, and subsequently declined to 61% by 2001. The corresponding figure on perceived risk of ***occasional heavy drinking*** (having five or more drinks once or twice a weekend) rose quite substantially, from 35% in 1979 to 49% in 1992, and then it, too, decreased—to 43% by 1997 and 44% in 2001. (Recall that the reported prevalence of occasional binge drinking declined from 41% in 1981 to 28% in 1993 and then rose slightly to 32% by 1998 and 30% in 2001.) The increases in perceived risk tended to be followed by some declines in the actual behaviors, while the decreases in perceived risk tended to be followed by some increases in those behaviors—once again suggesting the importance of these beliefs in influencing behavior. The increase in perceived risk during the 1980s may have been due in large part to the many efforts aimed at discouraging drunk driving—a point discussed in a recent article.[59]

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[59] O'Malley, P. M., & Johnston, L. D. (1999). Drinking and driving among American high school seniors: 1984-1997. *American Journal of Public Health, 89*, 678-684.

- Despite all that is known today about the health consequences of ***cigarette smoking***, more than a quarter (27%) of twelfth-grade students still do not believe that there is a great risk in smoking a pack or more of cigarettes per day (see Figure 8-10a).

  Over a longer period, the number of seniors who thought ***smoking a pack or more a day*** involved great risk to the user increased, from 51% in 1975 to 64% in 1980. This shift corresponded with, and to some degree preceded, the downturn in current smoking found in this age group (compare Figures 5-4k and 8-10a). Between 1980 and 1984, the perceived risk statistic showed no further increase and use showed no further decrease. Then, from 1984 to 1993 perceived risk inched up from 64% to 70% while use remained quite stable. Risk then declined a bit in 1994 and 1995 (as it did in the lower grades, as well) and use rose through 1997. Between 1995 and 1998 perceived risk rose about five percentage points, presaging a decline in smoking that began in 1998. Overall, in the 13-year interval between 1984 and 1997, the percentage of seniors perceiving great risk in regular smoking rose only about five percentage points, while use rose, not fell, by six percentage points. Clearly, influences other than perceived risk were at work here. Since 1997, perceived risk has risen by another four percentage points (from 69% to 73%), and use finally fell, by seven percentage points (from 37% to 30%).

- With regard to the regular use of ***smokeless tobacco***, relatively few seniors reported much risk (see Figure 8-11a), although there was a fair increase in the proportion who did, from 26% in 1986 (when the belief was first measured) to 39% in 1993. From 1993 to 1995 such concerns decreased a bit, declining to 33% in 1995, but then rose to reach 45% by 2001. Current use of smokeless tobacco has declined appreciably since 1995 (from 12% to 8%).

Trends in Perceived Harmfulness Among Eighth and Tenth Graders

- Data on perceived risk for eighth and tenth graders are not available for many of the drugs for which twelfth-grade data are provided, because the younger students were given a more limited set of questions.

- From the early 1990s until 1997, eighth and tenth graders showed troublesome declines in perceived risk for ***marijuana*** use, as did the seniors (see Tables 8-1 and 8-2 and Figure 8-1a). Indeed, the decreases in the perceived risk of marijuana use, which had been occurring at least since 1991 for eighth graders and since 1992 for tenth graders, became very sharp. For eighth graders, perceived risk of trying marijuana dropped from 40% in 1991 to 25% in 1997. For tenth graders, this measure dropped from 32% in 1992 to 19% in 1997. As is clear from Figure 8-1a, however, these declines in perceived risk for marijuana use had been decelerating, and stalled among tenth and twelfth graders through 2001. Among eighth graders there was actually a reverse, with perceived risk standing at 28% in

2001. The increased risk among eighth graders was accompanied by declining use.

- For ***crack*** and ***cocaine powder*** there was a large drop in perceived risk between 1991 and 1995 for both eighth and tenth graders. (For crack the declines were 12 and 10 percentage points for the two grades, respectively, and for cocaine powder, 11 and 6 percentage points.) There has been some further erosion in these beliefs in the years since then (see Table 8-1). Use of both drugs rose from a low point in 1991 or 1992 to a high point in 1998, over the same interval that perceived risk fell. Since then there has been little change in the measures of perceived risk.

- Perceived risk of ***LSD*** use has generally been declining in eighth and tenth grades since it was first measured in 1993, including statistically significant declines in 2001 in both grades for risk of regular use. Use, which had been increasing fairly steadily in all grades through 1996, has shown some appreciable decline in all grades since (including a significant drop in 2001 among the tenth graders). As we pointed out earlier, the recent drop in LSD use cannot be explained by concomitant changes in perceived risk.

- Questions about the dangers of ***inhalant*** use have been asked only of eighth and tenth graders. Perceived risk was relatively stable between 1991 and 1995, before showing a clear jump in 1996, then held steady through 2000 (see Table 8-1). Partly in response to the findings of growing inhalant use among teenagers from this study, in 1995 the Partnership for a Drug-Free America launched a media campaign to increase adolescents' awareness about the dangers associated with inhalant use. The data here are consistent with the notion that their efforts were successful, since the increase in perceived risk occurred in the years that bracket the intervention, and since most of the other drugs had not yet begun to show an increase in perceived risk at that point. In 2001, perceived risk of inhalant use rose significantly in both grades, and use declined (but not significantly).

- Because we see increased perceived risk as a central cause of the decline in various forms of illicit drug use, the softening in these beliefs in the early 1990s was troublesome, and it likely helps to explain the reversal of the downward trends in illicit drug use previously observed in the 1980s. It is a promising sign that the erosion in these beliefs seems to have ended for most drugs.

- For ***steroids***, in 1992, a noteworthy and constructive change occurred across all three grade levels. There were increases of between five and six percentage points across the three grade levels in respondents saying there is a "great risk" to the user in taking steroids. Between 70% and 73% of each grade level reported such risk. This suggested that the widely publicized experience of professional football player Lyle Alzado, who believed he was dying of a brain tumor caused by his steroid use, had an important effect on young people's beliefs about the harmfulness of this drug. The effect this "unfortunate role model" had was very similar to that of the death of Len Bias on beliefs about the dangers of cocaine use, except that in Lyle Alzado's case he became aware of the health consequences of his drug use well before his death and *intentionally* set about making his experience an object lesson for young people.[60] Unfortunately, the increases in perceived risk did not continue, and perceived risk slipped a bit in all three grades between 1992 and 1994 (after 1994 the question was dropped in the lower grades). Among the twelfth graders, perceived risk held steady for the next four years, followed by a sharp, six percentage point drop in 1999, which coincided with a sharp rise in use that year among eighth and tenth graders. We think it likely that another public figure served unwittingly as a role model that year, this time associating the use of steroids with athletic success. In 2000 there was a continued sharp decline in perceived risk of steroid use among twelfth graders, and a continuation of the increase in use among tenth graders (but not among eighth graders). In 2001 perceived risk leveled for the twelfth graders as use increased significantly. Use leveled for eighth and tenth graders.

- Even fewer eighth and tenth graders recognize the risk associated with pack-a-day ***cigarette smoking*** than seniors (see Figure 8-10a). From 1993 to 1995 perceived risk of smoking decreased some at all grade levels, as smoking rates rose in all grades. Since 1995, perceived risk has been rising in all three grade levels, including significant increases for eighth and tenth graders in 2000. Beginning in 1997, smoking rates began to decline in grades 8 and 10 and a year later began to decline among twelfth graders. It seems quite possible that the intense public debate over restrictive policies for the cigarette industry contributed to the observed changes in beliefs, which in turn appear to have contributed to the downturn in actual smoking. There were, in fact, a number of things happening in this historical period that may well have contributed to the decline in teen smoking. A series of public debates brought considerable adverse publicity to the product and the industry and eventually led to the settlement between the states and the tobacco companies. Additional deterrents included increased cigarette prices, substantial tobacco prevention efforts in several large states, the anti-smoking ad campaigns (the largest of which was funded by the American Legacy Foundation), the withdrawal of advertising from billboards, and the elimination of the Joe Camel ads (that we believe were particularly successful with adolescent boys from the upper end of the socioeconomic spectrum). In 2001, there were declines in current cigarette use among eighth and tenth graders (both significant), and among twelfth graders (not significant). However, these declines were not accompanied by continuing increases in perceived risk.

- The dangers associated with having five or more drinks of ***alcohol*** once or twice each weekend had been slipping since 1991 in the case of eighth graders (down from 59% in 1991 to 52% in 1996) and since 1992 in the case of tenth graders (down from 56% in 1992 to 51% in 1996). (Recall that such self-reported ***heavy drinking*** had been rising gradually during the same time intervals.) Since 1996, however, there has been little further change in perceived risk of heavy drinking in both eighth and tenth grades. Actual heavy drinking has held fairly steady, as well.

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[60] The July 8, 1991, issue of *Sports Illustrated* magazine had an article by Lyle Alzado entitled "I Lied." For a discussion of the importance of vicarious learning from unfortunate role models see Johnston, L. D. (1991). Toward a theory of drug epidemics. In R. L. Donohew, H. Sypher, & W. Bukoski (Eds.), ***Persuasive communication and drug abuse prevention*** (pp. 93-131). Hillsdale, NJ: Lawrence Erlbaum.

- The risks perceived to be associated with the regular use of ***smokeless tobacco*** showed some decline from 1993 to 1995 in all three grades and then increased by about the same amount between 1995 and 2000, including a significant increase for tenth graders in 2000 (see Figure 8-11a). There was little change in 2001 for eighth and tenth graders. Among twelfth graders, perceived risk reached its highest point in 2001 (45%) since this question was first asked in 1986 (when it was 26%).

PERSONAL DISAPPROVAL OF DRUG USE

At the beginning of the Monitoring the Future study we included a set of questions to measure the moral sentiment respondents attach to various types of drug use. The phrasing, "Do you disapprove of people (who are 18 or older) doing each of the following?" was adopted. The answer alternatives are "don't disapprove," "disapprove," and "strongly disapprove." For eighth and tenth grades a fourth response "can't say, drug unfamiliar" was included. Responses of "disapprove" or "strongly disapprove" are combined as "disapproval." For eighth and tenth graders "can't say, drug unfamiliar" was included in calculating the percentages. The questions each specify a level of involvement, such as "trying marijuana," "using marijuana occasionally," or "using marijuana regularly."

Extent of Disapproval Among Twelfth Graders

- The vast majority of twelfth graders do not condone *regular* use of any of the illicit drugs (see Table 8-4). Even ***regular marijuana use*** is disapproved of (or strongly disapproved of) by 79%, and regular use of each of the other illicit drugs received disapproval from between 92% and 96% of today's high school seniors.

- For each of the drugs included in this set of questions, fewer respondents indicated disapproval of experimental or occasional use than of regular use. However, the differences are not great for the use of illicit drugs other than marijuana, because nearly all seniors disapprove of even experimenting with them. For example, 80% disapprove of experimenting with ***ecstasy***, 82% with ***LSD***, 83% with ***cocaine powder***, 86% with ***barbiturates***, 87% with ***crack***, and 93% with ***heroin***. This widespread disapproval of illicit drug use among peers no doubt is underestimated by adolescents themselves and, as we have written elsewhere, provides the basis for some potentially powerful prevention messages in the form of normative education.[61]

- For ***marijuana***, the rate of disapproval varies substantially for different usage levels, although not as much as it has in the past. Nearly half (49%) disapprove of trying marijuana once or twice, almost two-thirds (63%) disapprove of its occasional use, and 79% disapprove of regular use.

- Smoking a pack (or more) of ***cigarettes*** per day is disapproved by more than two-thirds (72%) of twelfth-grade students.

- Taking ***one or two drinks nearly every day*** is disapproved of by 69% of the seniors. Curiously, ***weekend binge drinking*** (five or more drinks once or twice each weekend) is disapproved of by fewer seniors (63%), despite the fact that many more seniors see a great risk in weekend binge drinking (44%) than in having one or two drinks nearly every day (23%).

  One likely explanation for these anomalous findings may be that a greater proportion of this age group are themselves weekend binge drinkers rather than moderate daily drinkers. Therefore, they may express attitudes accepting of their own behavior, even though such attitudes may be somewhat inconsistent with their beliefs about possible consequences. It also may be that the ubiquitous advertising of alcohol use in partying situations has managed to increase social acceptability from what it would be in the absence of such advertising. In any case, this divergence between the perceived risk associated with the two behaviors and the levels of disapproval of them, helps to illustrate the point that, while perceived risk may influence disapproval (as we have hypothesized), other factors also play a role in determining the level of disapproval.

Extent of Disapproval Among Eighth and Tenth Graders

- Attitudes about ***inhalant*** use have been asked only of the eighth- and tenth-grade students, and in 2001 the great majority (87% and 88%, respectively) said they disapprove of even trying inhalants.

- Currently the rates of disapproval for the use of ***crack*** and ***cocaine powder*** are about equivalent across all grade levels (see Tables 8-3 and 8-4).

- ***Marijuana*** use shows the greatest grade-related difference in disapproval rates—the lower the grade level, the higher the rate of disapproval. To illustrate, in 2001, 49% of twelfth graders said they disapprove of trying marijuana compared to 55% of tenth graders and 72% of eighth graders (see Tables 8-3 and 8-4). There now is considerable evidence that these attitudes do shift with age—that there is an "age effect" common to all cohorts. For example, the eighth graders of 1991 for the most part constituted the tenth graders of 1993 and the twelfth graders of 1995, and their disapproval of trying marijuana fell from 85% in eighth grade, to 70% by tenth grade, and to 57% by twelfth grade. This drop far exceeds the secular trend at any given grade level. (It is also possible that, in addition to any age effects, there are lasting differences between class cohorts [i.e., cohort effects]).

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[61] Johnston, L. D. (1991). Contributions of drug epidemiology to the field of drug abuse prevention. In C. Leukefeld & W. Bukoski (Eds.) *Drug abuse prevention research: Methodological issues* (pp. 57-80). (NIDA Research Monograph 107). Washington, DC: National Institute on Drug Abuse.

Another possible explanation for this decrease in disapproval with age is that their attitudes about use are age-graded—that is, that they may disapprove more of an eighth grader using marijuana, less so for a tenth grader, and still less for a twelfth grader. The question stem used at the lower grades does not specify the age of the person about whom they are answering, whether or not they would disapprove, and the respondents may simply assume that the question is about people their age. The question asked of twelfth graders over the years specifies people "who are 18 or older," which corresponds to their current age.

- Disapproval of ***alcohol*** use is also higher at the lower grade levels. For example, 63% of the seniors said they disapprove of ***weekend binge drinking*** versus 69% of the tenth graders and 82% of the eighth graders. We think it likely that a cohort shift in attitudes about drinking has taken place, perhaps due in part to the fact that a number of states increased their drinking age to twenty-one.

- For ***cigarette*** use, 72% of twelfth graders, 78% of tenth graders, and 84% of eighth graders said they disapprove of someone smoking one or more packs per day. Oddly enough, the eighth graders, who are least likely to see regular smoking as dangerous, are the most likely to disapprove of it. This disparity may help to explain why so many do begin to smoke. In the absence of an underlying belief that smoking really represents a hazard to them, many may not be deterred by the predominant peer norms alone.

TRENDS IN DISAPPROVAL OF DRUG USE

As illustrated next, while the perceived risk associated with a drug often reverses course a year *prior* to the actual use of that drug, disapproval tends to move in a way more consistent with use. In other words, it tends to rise in parallel with falling use and to fall when use rises.

Trends in Disapproval Among Twelfth Graders

- Between 1975 and 1977, a substantial decrease occurred in disapproval of ***marijuana*** use at any level of frequency (see Figure 8-1b and Table 8-4). The proportion of seniors in the class of 1977 (compared with the class of 1975) who disapproved of *experimenting* was 14 percentage points lower, the proportion who disapproved of *occasional* use was 11 percentage points lower, and the proportion who disapproved of *regular* use was about six percentage points lower. These undoubtedly were continuations of longer-term trends that began in the late 1960s, as the norms of American young people against illicit drug use seriously eroded. Between 1977 and 1990, however—a thirteen-year interval—there was a substantial reversal of that trend as disapproval of experimental marijuana use rose by 34 percentage points, disapproval of occasional use by 36 percentage points, and disapproval of regular use by 26 percentage points. There were no further significant changes in 1991 or 1992, although disapproval of experimental use continued to rise.

Beginning in 1993 (a year *after* perceived risk began to decline), a sharp drop in disapproval of marijuana use emerged. Between 1992 and 1997, disapproval dropped 19 percentage points for experimental use, 17 percentage points for occasional use, and 11 percentage points for regular use. These changes accompanied a significant increase in the self-reported use of marijuana. By the mid-1990s, the decline in disapproval of marijuana use began to decelerate. There was little further systematic change after 1997.

- Until 1980 the proportion of seniors who disapproved of trying ***amphetamines*** remained extremely stable at 75% (see Figure 8-6b and Table 8-4). This proportion dropped some in 1981 (to 71%) and then increased gradually over a decade until it reached 87% in 1991, where it remained in 1992. After 1992, a reversal began: disapproval had dropped by 7 percentage points by 1996. Self-reported use increased over the same period. There were slight rises in disapproval in 1997 and 1998, but little change since then.

- During the late 1970s, personal disapproval of experimenting with ***barbiturates*** increased (from 78% in 1975 to 84% in 1979) and then remained relatively stable through 1984, when it began to increase again (see Figure 8-6b). By 1990, disapproval had reached 91%. Use declined substantially from 1975 to 1992. Between 1993 and 1996, disapproval dropped to 85% as use rose; but, as with amphetamines, disapproval began to rise again in 1997 and then leveled beginning in 1998 at about 86%.

- Concurrent with the years of increase in actual ***cocaine*** use, disapproval of experimental use of cocaine declined somewhat, from a high of 82% in 1976 to a low of 75% in 1979 (see Figure 8-2b). It then leveled for four years, before edging upward for a couple of years to 80% in 1986. There was a sharp rise in disapproval between 1986 and 1987, the same interval in which perceived risk rose dramatically. This rise continued through 1991, reaching 94% of seniors disapproving of trying cocaine. Between 1992 and 1997, disapproval slowly declined to 88% in 1997 (as use steadily increased) before leveling. Disapproval of trying both ***cocaine powder*** and ***crack cocaine*** (see Figure 8-3b) peaked in

1992, after which there was a modest falloff. Since 1996, however, there has been practically no change in seniors' disapproval of crack or powder cocaine.

- We believe that the parallel (or slightly lagged) trends between perceived risk and disapproval—particularly for marijuana and cocaine use—are no accident. We hypothesize that perceived risk is an important influence on an individual's level of disapproval of a drug-using behavior, although there surely are other influences as well. As levels of personal disapproval change, these individually held attitudes are communicated among friends and acquaintances, and thus perceived norms change as well (as will be illustrated in the next chapter). It is noteworthy that as perceived risk for use of most of the illicit drugs began to reverse in 1991 or 1992, personal disapproval of use of virtually all of them appeared to level. In 1993, personal disapproval among seniors began to drop for use of nearly all of the illicit drugs (see Table 8-4) and it continued to fall for use of many of them through 1997, although it has leveled for many since then. This time lag suggests that perceived risk influences disapproval, which, in turn, changes peer norms.

- Disapproval of trying ***ecstasy*** has been asked of the twelfth graders since 1997 and of eighth and tenth grades beginning in 2001. Disapproval among twelfth graders has declined slightly in last two years, from 82% in 1999 to 80% in 2001. The 80% figure is the lowest level observed for any of the illicit drugs asked, other than marijuana. The slight decline in disapproval recorded in 2001 contrasts with the sharp increase observed in perceived risk.

- Despite the large changes that were taking place in adult use of cigarettes, and presumably in adult attitudes about smoking, young people's disapproval of ***regular cigarette smoking*** (a pack or more per day) changed surprisingly little throughout much of the life of this study. Disapproval increased from 66% to 71% between 1976 and 1980, slightly ahead of the downturn in use between 1977 and 1981. Disapproval fluctuated slightly throughout the 1980s and 1990s, with some increase between 1982 (69%) and 1986 (75%) and some gradual decline through 1997 (67%, almost exactly where it started 21 years earlier). (Recall that use increased from 1992 through 1997 as disapproval was declining.) Since 1997, disapproval has increased steadily and is at 72% in 2001; use has declined steadily in the same interval. The earlier lack of appreciable change in students' disapproval of smoking is surprising, because so many anti-smoking laws and policies had been enacted during that period. Very likely, the promotion and advertising efforts of the tobacco industry helped to account for this lack of change in disapproval as did the widespread portrayal of smoking by characters, often the lead characters, in movies and on television.

  It is worth noting that the disapproval rates among eighth and tenth graders also drifted downward between 1991 and 1996 (as their smoking rates rose dramatically) but have been rising some since 1996 (as their smoking rates have fallen significantly).

- Figure 8-9b tracks disapproval rates for several different patterns of ***alcohol*** use. It shows that twelfth graders' disapproval of most forms of alcohol use rose throughout the 1980s and into the early 1990s. Then, between 1992 or 1993 and 1998 or 1999 there was considerable falloff in the proportion disapproving of many of these behaviors. In 2001, disapproval of most forms of alcohol use decreased somewhat, though none significantly.

- With regard to abstention, the proportion of seniors who disapproved of even ***trying one or two drinks of alcohol*** doubled, from a low point of 16% in 1980 to 33% by 1992. It fell back to 25% by 1998, but has increased slightly since then to 27% in 2001.

  It seems likely that the increased minimum drinking age in many states between 1981 and 1987 contributed to these changes in attitude about abstention, since more recent senior classes grew up under the higher minimum drinking age.[62] If so, this illustrates the considerable capacity of laws to influence informal norms. It also seems likely that the activities of Mothers Against Drunk Driving, which peaked in 1984, and of the designated driver effort, which occurred mostly from 1989 to 1992, helped to influence these attitudes.[63]

- Disapproval of weekend ***heavy drinking*** rose gradually but quite substantially, from a low of 56% in 1981 to a high of 71% by 1992. Over that same 11-year interval, the self-reported rate of occasional heavy drinking declined from a high of 41% in 1981 to a low of 28% in 1992. While the ad campaigns mentioned earlier dealt specifically with drinking and driving, we believe that the negative connotations may well have generalized to heavy drinking.

  After 1992, disapproval of occasional heavy drinking briefly fell, from 71% in 1992 to 65% by 1994. It has remained fairly stable at 63%-65% through 2001.

Trends in Disapproval Among Eighth and Tenth Graders

Table 8-3 provides ten-year trends (1991-2001) in disapproval for eighth and tenth graders, and Table 8-4 provides the long-term trends for twelfth graders. The lower panels in many of the figures in this chapter provide the same information for individual drugs, when data for the lower grade levels are available.

- In 1992, tenth- and twelfth-grade students showed little change in disapproval of the use of illicit drugs, but eighth graders showed some erosion in their attitudes with respect to using ***marijuana***, ***cocaine powder***, and ***crack***. In 1993, rates of disapproval for using these drugs continued to decline among eighth graders and began to decline among tenth and twelfth graders, as well (see Tables 8-3 and 8-4 and Figures 8-1b and 8-3b). Between 1993 and 1996, disapproval of both ***marijuana*** use and ***LSD*** use declined in all three grades.

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[62] O'Malley, P. M., & Wagenaar, A. C. (1991). Effects of minimum drinking age laws on alcohol use, related behaviors, and traffic crash involvement among American youth: 1976-1987. *Journal of Studies on Alcohol, 52*, 478-491.

[63] O'Malley, P. M., & Johnston, L. D. (1999). Drinking and driving among U.S. high school seniors, 1984-1997. *American Journal of Public Health, 89*, 678-684.

- The declines in personal disapproval were particularly sharp for ***marijuana*** at all three grade levels. Between 1991 and 1997, the proportion of eighth graders who disapproved of trying marijuana fell from 85% to 68%. Personal disapproval among tenth graders fell from 75% to 54%, and among twelfth graders it fell from 69% to 51% over the same period. Finally, in 1998 there were some early signs of a reversal in this trend at all grade levels, although none of the increases reached statistical significance. In 1999 we saw a significant increase in disapproval of experimental use for the eighth graders, a leveling of disapproval rates for tenth graders, and some further decline in this measure for twelfth graders. In 2000 disapproval increased significantly among eighth and twelfth graders but slipped a bit among tenth graders. In 2001 there was little change in eighth graders' disapproval of using marijuana; tenth and twelfth graders' disapproval dropped some (not significantly). From 1993 to 1996, disapproval of ***LSD*** use declined along with perceived risk, and self-reported use increased. After 1996 among eighth and tenth graders there was some leveling in disapproval until 2000, followed by some further decline through 2001. Among twelfth graders, there was a slight increase in disapproval between 1996 and 1999, after which disapproval leveled. As noted earlier, the *use* of LSD has decreased in recent years despite the fact that there has not been an increase in either perceived risk or disapproval.

- Disapproval of ***crack*** and ***cocaine powder*** fell from 1991 through 1996 among eighth graders, from 1991 through 1997 among tenth graders, and from 1992 through 1997 among twelfth graders. These attitudes have changed rather little since. The softening in attitudes about using crack and cocaine powder eventually translated into changes in usage levels. For example, crack use rose from 1991 through 1998 in eighth grade, from 1992 through 1998 in tenth grade, and from 1993 through 1999 in twelfth grade. Since those recent peaks in use, there has been some falloff at all grades in the use of both crack and powder cocaine. As with LSD, this recent decline in use is occurring without any shift in risk or disapproval, suggesting the possibility that there is some substitution by another drug occurring. Ecstasy would seem the most logical candidate, since it is really the only drug on the ascent in the last several years. The fact that the decline in crack and other cocaine use is not girded by any shift in these underlying attitudes and beliefs may mean that it could be reversed rather easily if the popularity of competing drugs, like ecstasy, should slip (see Tables 2-1 through 2-3).

- Regarding the use of ***inhalants***, there was a little slippage in the disapproval rates among eighth graders from 1991 to 1995, but none among tenth graders. Recall that perceived risk for inhalants jumped between 1995 and 1996. Disapproval inched up from 1995 through 1998, but in 1999 jumped significantly in both grades (by 1.8 percentage points), with little change since for the tenth graders. For the eighth graders there has been some increase in disapproval since 1998.

- Disapproval of weekend ***binge drinking*** declined among eighth graders between 1991 and 1996 and among tenth and twelfth graders between 1992 and 1997, before leveling (see Figure 8-9b).

- Disapproval of ***smoking one or more packs of cigarettes per day*** also declined significantly, from 1991 to 1996 among eighth and tenth graders and from 1992 to 1996 among twelfth graders (see Figure 8-10b), corresponding to periods of sharp increases in their use of cigarettes. Since 1996, however, disapproval has been turning upward in both lower grades, and the same has been happening since 1997 in grade 12. These recent changes in attitude may well have been brought about by the extremely adverse publicity suffered by the tobacco industry during these years. Also, the Joe Camel advertising campaign ended, billboards advertising cigarettes were removed, and a number of states initiated anti-smoking campaigns aimed at youth.

ATTITUDES REGARDING THE LEGALITY OF DRUG USE

At the beginning of the study in 1975, legal restraints on drug use appeared likely to be in a state of flux for some time. (Little did we know for how long a time.) Therefore, we decided to measure attitudes about legal sanctions. As it turns out, some dramatic changes in these attitudes have occurred during the life of the study. Table 8-5 presents a set of questions on this subject along with the answers provided by each senior class. The set lists a sampling of illicit and licit drugs and asks respondents whether the use of each should be prohibited by law. A distinction is made between *use in public* and *use in private*—one that has proven quite important. (These questions have not been asked of the eighth- and tenth-grade respondents.)

Attitudes of Twelfth Graders

- The great majority of seniors believe that the use in public of ***illicit drugs other than marijuana*** should be prohibited by law. For instance, in the case of ***amphetamines*** or ***barbiturates***, 75% of the seniors believe that use in public should be prohibited, and 82% believe that such use of ***heroin*** should be prohibited. Even use in private is opposed by the majority, though by smaller proportions: for example, 56% believe that the use in private of ***amphetamines*** or ***barbiturates*** should be illegal, 63% for ***LSD*** use, and 71% for ***heroin*** use.

- The great majority of seniors (68%) also favor legally prohibiting ***marijuana*** use in public places, despite the fact that about half of them have used marijuana themselves and despite the fact that many do not judge it to be as dangerous as other drugs. Considerably fewer (39%) feel that marijuana use in private should be prohibited.

- Some 44% of twelfth graders believe that ***cigarette smoking*** in "certain specified public places" should be prohibited by law. Were the question more specific as to the types of public places in which smoking might be prohibited (e.g., restaurants and hospitals), quite different results might have emerged. Somewhat more think ***getting drunk*** in public should be prohibited (51%).

- For ***all drugs*** included in the question, fewer seniors believe that use in private settings should be illegal than believe this about use in public. This is particularly true for ***getting drunk*** and for ***marijuana*** use.

Trends in These Attitudes Among Twelfth Graders

- From 1975 through 1978 there were modest declines (shifts of five to seven percentage points, depending on the substance) in the proportions of seniors who favored legal prohibition of private use of any of the five illicit drugs (see Table 8-5). By 1990 (twelve years later), all of these proportions had increased substantially, with shifts of 8 to 31 percentage points. The proportion who thought ***marijuana*** use in private should be prohibited by law more than doubled, from 25% in 1978 to 56% in 1990—a dramatic shift.

  Then, between 1990 and 1997, positions on prohibition of the use of all the illicit drugs softened once again, particularly in the case of marijuana, for which the percentage favoring prohibitive laws fell from 56% in 1990 to 39% in 1997. Since 1997 these attitudes have been relatively stable. One exception is that the percentage thinking that smoking marijuana in public places should be prohibited declined significantly in 2001, to 68% (still more than two-thirds of seniors); this is the lowest figure since 1981.

- There has been rather little change in the proportion of seniors who said ***smoking cigarettes*** "in certain specified public places" should be prohibited by law. In 1977, 42% held this view versus 44% in 2001, 24 years later.

- Attitudes about the legality of ***drunkenness*** in public or private places have changed little over the past 26 years, but there was a small change toward less tolerance of drunkenness in private. The stability of attitudes about the preferred legality for this culturally ingrained drug-using behavior contrasts sharply with the liability of attitudes regarding the legality of using illicit drugs.

THE LEGAL STATUS OF MARIJUANA

Another set of questions asks with more specificity what legal sanctions, if any, seniors think should be attached to the *use* and *sale* of marijuana. Respondents also are asked to guess how they would be likely to react to the legalized use and sale of the drug. The answers to such a hypothetical question must be interpreted with considerable caution, of course.

Attitudes and Predicted Responses to Legalization

- As shown in Table 8-6, in 2001 nearly one-third (31%) of all seniors believed that marijuana use should be treated as a crime. More than one-quarter thought it should be entirely legal (29%), and one-quarter (25%) felt it should be treated as a minor violation—like a parking ticket—but not as a crime. (The remaining 15% said they "don't know.")

- Asked whether they thought it should be legal to sell marijuana *if* it were legal to use it, well over half (56%) said "yes." However, about three-fourths of those answering "yes" (44% of all respondents) would permit the sale *only* to adults. A small minority (12%) favored the sale to anyone, regardless of age, while 30% said that sale should not be legal, and 14% said they "don't know."

- Most high school seniors felt that they would be little affected personally by the legalization of either the sale or the use of marijuana. More than half (58%) of the respondents said that they would not use the drug even if it were legal to buy and use it, and another 19% indicated they would use it about as often as they do now or less often. Only 6% said they would use it more often than they do at present and only another 9% thought they would try it. Seven percent said they did not know how their behavior would be affected if marijuana were legalized.

  A study of the effects of decriminalization by several states during the late 1970s found no evidence of any impact on the use of marijuana among young people, nor on attitudes and beliefs concerning its use.[64] However, it should be noted that *decriminalization* falls well short of the full *legalization* posited in the questions that we ask of seniors. Moreover, the situation today is very different than it was in the late 1970s, with much more peer disapproval and more rigorous enforcement of drug laws. More recent studies suggest that there is indeed an impact of decriminalization, such that "youths living in decriminalized states are significantly more likely to report currently using marijuana."[65]

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[64] See Johnston, L. D., O'Malley, P. M., & Bachman, J. G. (1981). *Marijuana decriminalization: The impact on youth, 1975-1980* (Monitoring the Future Occasional Paper No. 13). Ann Arbor, MI: Institute for Social Research.

[65] Chaloupka, F. J., Pacula, R. L., Farrelly, M. C., Johnston, L. D., O'Malley, P. M., & Bray, J. W. (February 1999). *Do higher cigarette prices encourage youth to use marijuana?* NBER Working Paper No. 6939.

Trends in Attitudes and Predicted Responses

- In the twelve-year interval between 1978 and 1990, American young people became much more supportive of legal prohibitions of the use of ***all illegal drugs***, whether used in private or in public (see Table 8-5).

- Between 1976 and 1979, seniors' preferences for decriminalization or legalization of ***marijuana*** remained fairly constant (see Table 8-6); but between 1979 and 1990 the proportion favoring outright legalization dropped by half (from 32% in 1979 to 16% in 1990), while there was a corresponding doubling in the proportion saying marijuana use should be a crime (from 24% to 53%). Also reflecting this increased conservatism about marijuana use, somewhat fewer said they would support legalized *sale* even if *use* were made legal (down from 65% in 1979 to 48% in 1990).

  After 1990 these policy attitudes began to change again. Fewer favored criminal penalties and more favored legal sale (see Table 8-6). For example, in 1996 the proportion saying that using marijuana should be entirely legal was 31%, up from 16% in 1990, and the proportion saying it should be a crime was 34%, down from 53% in 1990. For the most part, these attitudes have not changed in any systematic pattern in the last few years, although the proportion saying marijuana use should be a crime has declined another 3% since 1997. One thing that has become clear over the past 26 years is that young people's policy preferences regarding the legal status of marijuana and other drugs track rather closely the extent to which they personally disapprove of the use of those drugs *and* the extent to which they are using them.

- The predictions about personal marijuana use, if sale and use were legalized, have been quite similar for all high school classes. The slight shifts observed have been attributable mostly to the changing proportions of seniors who actually have used marijuana.

TABLE 8-1

Trends in **Harmfulness** of Drugs as Perceived by Eighth and Tenth Graders, 1991–2001

Q. *How much do you think people risk harming themselves (physically or in other ways), if they . . .*	Percentage saying "great risk"[a]																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Try marijuana once or twice	40.4	39.1	36.2	31.6	28.9	27.9	25.3	28.1	28.0	29.0	27.7	-1.3	30.0	31.9	29.7	24.4	21.5	20.0	18.8	19.6	19.2	18.5	17.9	-0.5
Smoke marijuana occasionally	57.9	56.3	53.8	48.6	45.9	44.3	43.1	45.0	45.7	47.4	46.3	-1.2	48.6	48.9	46.1	38.9	35.4	32.8	31.9	32.5	33.5	32.4	31.2	-1.2
Smoke marijuana regularly	83.8	82.0	79.6	74.3	73.0	70.9	72.7	73.0	73.3	74.8	72.2	-2.5ss	82.1	81.1	78.5	71.3	67.9	65.9	65.9	65.8	65.9	64.7	62.8	-1.9
Try inhalants once or twice[b]	35.9	37.0	36.5	37.9	36.4	40.8	40.1	38.9	40.8	41.2	45.6	+4.5sss	37.8	38.7	40.9	42.7	41.6	47.2	47.5	45.8	48.2	46.6	49.9	+3.3ss
Try inhalants regularly[b]	65.6	64.4	64.6	65.5	64.8	68.2	68.7	67.2	68.8	69.9	71.6	+1.6	69.8	67.9	69.6	71.5	71.8	75.8	74.5	73.3	76.3	75.0	76.4	+1.4
Try LSD once or twice[c]	—	—	42.1	38.3	36.7	36.5	37.0	34.9	34.1	34.0	31.6	-2.4	—	—	48.7	46.5	44.7	45.1	44.5	43.5	45.0	43.0	41.3	-1.6
Take LSD regularly[c]	—	—	68.3	65.8	64.4	63.6	64.1	59.6	58.8	57.5	52.9	-4.6s	—	—	78.9	75.9	75.5	75.3	73.8	72.3	73.9	72.0	68.8	-3.2s
Try MDMA (Ecstasy) once or twice[d]	—	—	—	—	—	—	—	—	—	—	35.8	—	—	—	—	—	—	—	—	—	—	—	39.4	—
Take MDMA (Ecstasy) occasionally[d]	—	—	—	—	—	—	—	—	—	—	55.5	—	—	—	—	—	—	—	—	—	—	—	64.8	—
Try crack once or twice[b]	62.8	61.2	57.2	54.4	50.8	51.0	49.9	49.3	48.7	48.5	48.6	+0.2	70.4	69.6	66.6	64.7	60.9	60.9	59.2	58.0	57.8	56.1	57.1	+1.0
Take crack occasionally[b]	82.2	79.6	76.8	74.4	72.1	71.6	71.2	70.6	70.6	70.1	70.0	-0.1	87.4	86.4	84.4	83.1	81.2	80.3	78.7	77.5	79.1	76.9	77.3	+0.4
Try cocaine powder once or twice[b]	55.5	54.1	50.7	48.4	44.9	45.2	45.0	44.0	43.3	43.3	43.9	+0.6	59.1	59.2	57.5	56.4	53.5	53.6	52.2	50.9	51.6	48.8	50.6	+1.7
Take cocaine powder occasionally[b]	77.0	74.3	71.8	69.1	66.4	65.7	65.8	65.2	65.4	65.5	65.8	+0.4	82.2	80.1	79.1	77.8	75.6	75.0	73.9	71.8	73.6	70.9	72.3	+1.5
Try heroin once or twice without using a needle[e]	—	—	—	—	60.1	61.3	63.0	62.8	63.0	62.0	61.1	-0.9	—	—	—	—	70.7	72.1	73.1	71.7	73.7	71.7	72.0	+0.3
Take heroin occasionally without using a needle[e]	—	—	—	—	76.8	76.6	79.2	79.0	78.9	78.6	78.5	-0.1	—	—	—	—	85.1	85.8	86.5	84.9	86.5	85.2	85.4	+0.2
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	11.0	12.1	12.4	11.6	11.6	11.8	10.4	12.1	11.6	11.9	12.2	+0.4	9.0	10.1	10.9	9.4	9.3	8.9	9.0	10.1	10.5	9.6	9.8	+0.2
Take one or two drinks nearly every day	31.8	32.4	32.6	29.9	30.5	28.6	29.1	30.3	29.7	30.4	30.0	-0.4	36.1	36.8	35.9	32.5	31.7	31.2	31.8	31.9	32.9	32.3	31.5	-0.8
Have five or more drinks once or twice each weekend	59.1	58.0	57.7	54.7	54.1	51.8	55.6	56.0	55.3	55.9	56.1	+0.2	54.7	55.9	54.9	52.9	52.0	50.9	51.8	52.5	51.9	51.0	50.7	-0.3
Smoke one or more packs of cigarettes per day[e]	51.6	50.8	52.7	50.8	49.8	50.4	52.6	54.3	54.8	58.8	57.1	-1.7	60.3	59.3	60.7	59.0	57.0	57.9	59.9	61.9	62.7	65.9	64.7	-1.2
Use smokeless tobacco regularly	35.1	35.1	36.9	35.5	33.5	34.0	35.2	36.5	37.1	39.0	38.2	-0.7	40.3	39.6	44.2	42.2	38.2	41.0	42.2	42.8	44.2	46.7	46.2	-0.5
Take steroids[f]	64.2	69.5	70.2	67.6	—	—	—	—	—	—	—	—	67.1	72.7	73.4	72.5	—	—	—	—	—	—	—	—
Approx. N (in thousands) =	*17.4*	*18.7*	*18.4*	*17.4*	*17.5*	*17.9*	*18.8*	*18.1*	*16.7*	*16.7*	*16.2*		*14.7*	*14.8*	*15.3*	*15.9*	*17.0*	*15.7*	*15.6*	*15.0*	*13.6*	*14.3*	*14.0*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

[b] Beginning in 1997, data based on two-thirds of N indicated due to changes in questionnaire forms.

[c] Data based on one of two forms in 1993–96; N is one-half of N indicated. Beginning in 1997, data based on one-third of N indicated due to changes in questionnaire forms.

[d] Data based on one-third of N indicated due to changes in questionnaire forms.

[e] Beginning in 1999, data based on two-thirds of N indicated due to changes in questionnaire forms.

[f] Data based on two forms in 1991 and 1992. Data based on one of two forms in 1993 and 1994; N is one-half of N indicated.

TABLE 8-2
Long-Term Trends in Harmfulness of Drugs as Perceived by Twelfth Graders

	Percentage saying "great risk"*													
	12th Grade													
Q. *How much do you think people risk harming themselves (physically or in other ways), if they . . .*	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988
Try marijuana once or twice	15.1	11.4	9.5	8.1	9.4	10.0	13.0	11.5	12.7	14.7	14.8	15.1	18.4	19.0
Smoke marijuana occasionally	18.1	15.0	13.4	12.4	13.5	14.7	19.1	18.3	20.6	22.6	24.5	25.0	30.4	31.7
Smoke marijuana regularly	43.3	38.6	36.4	34.9	42.0	50.4	57.6	60.4	62.8	66.9	70.4	71.3	73.5	77.0
Try LSD once or twice	49.4	45.7	43.2	42.7	41.6	43.9	45.5	44.9	44.7	45.4	43.5	42.0	44.9	45.7
Take LSD regularly	81.4	80.8	79.1	81.1	82.4	83.0	83.5	83.5	83.2	83.8	82.9	82.6	83.8	84.2
Try PCP once or twice	—	—	—	—	—	—	—	—	—	—	—	—	55.6	58.8
Try MDMA (Ecstasy) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cocaine once or twice	42.6	39.1	35.6	33.2	31.5	31.3	32.1	32.8	33.0	35.7	34.0	33.5	47.9	51.2
Take cocaine occasionally	—	—	—	—	—	—	—	—	—	—	—	54.2	66.8	69.2
Take cocaine regularly	73.1	72.3	68.2	68.2	69.5	69.2	71.2	73.0	74.3	78.8	79.0	82.2	88.5	89.2
Try crack once or twice	—	—	—	—	—	—	—	—	—	—	—	—	57.0	62.1
Take crack occasionally	—	—	—	—	—	—	—	—	—	—	—	—	70.4	73.2
Take crack regularly	—	—	—	—	—	—	—	—	—	—	—	—	84.6	84.8
Try cocaine powder once or twice	—	—	—	—	—	—	—	—	—	—	—	—	45.3	51.7
Take cocaine powder occasionally	—	—	—	—	—	—	—	—	—	—	—	—	56.8	61.9
Take cocaine powder regularly	—	—	—	—	—	—	—	—	—	—	—	—	81.4	82.9
Try heroin once or twice	60.1	58.9	55.8	52.9	50.4	52.1	52.9	51.1	50.8	49.8	47.3	45.8	53.6	54.0
Take heroin occasionally	75.6	75.6	71.9	71.4	70.9	70.9	72.2	69.8	71.8	70.7	69.8	68.2	74.6	73.8
Take heroin regularly	87.2	88.6	86.1	86.6	87.5	86.2	87.5	86.0	86.1	87.2	86.0	87.1	88.7	88.8
Try heroin once or twice without using a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try heroin occasionally without using a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try amphetamines once or twice	35.4	33.4	30.8	29.9	29.7	29.7	26.4	25.3	24.7	25.4	25.2	25.1	29.1	29.6
Take amphetamines regularly	69.0	67.3	66.6	67.1	69.9	69.1	66.1	64.7	64.8	67.1	67.2	67.3	69.4	69.8
Try crystal meth. (ice) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try barbiturates once or twice	34.8	32.5	31.2	31.3	30.7	30.9	28.4	27.5	27.0	27.4	26.1	25.4	30.9	29.7
Take barbiturates regularly	69.1	67.7	68.6	68.4	71.6	72.2	69.9	67.6	67.7	68.5	68.3	67.2	69.4	69.6
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	5.3	4.8	4.1	3.4	4.1	3.8	4.6	3.5	4.2	4.6	5.0	4.6	6.2	6.0
Take one or two drinks nearly every day	21.5	21.2	18.5	19.6	22.6	20.3	21.6	21.6	21.6	23.0	24.4	25.1	26.2	27.3
Take four or five drinks nearly every day	63.5	61.0	62.9	63.1	66.2	65.7	64.5	65.5	66.8	68.4	69.8	66.5	69.7	68.5
Have five or more drinks once or twice each weekend	37.8	37.0	34.7	34.5	34.9	35.9	36.3	36.0	38.6	41.7	43.0	39.1	41.9	42.6
Smoke one or more packs of cigarettes per day	51.3	56.4	58.4	59.0	63.0	63.7	63.3	60.5	61.2	63.8	66.5	66.0	68.6	68.0
Use smokeless tobacco regularly	—	—	—	—	—	—	—	—	—	—	—	25.8	30.0	33.2
Take steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Approx. N =	*2804*	*2918*	*3052*	*3770*	*3250*	*3234*	*3604*	*3557*	*3305*	*3262*	*3250*	*3020*	*3315*	*3276*

*Answer alternatives were: (1) No risk, (2) Slight risk, (3) Moderate risk, (4) Great risk, and (5) Can't say, drug unfamiliar.

(Table continued on next page)

TABLE 8-2 (cont.)
Long-Term Trends in Harmfulness of Drugs as Perceived by Twelfth Graders

	Percentage saying "great risk"													
	12th Grade													
Q. *How much do you think people risk harming themselves (physically or in other ways), if they . . .*	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Try marijuana once or twice	23.6	23.1	27.1	24.5	21.9	19.5	16.3	15.6	14.9	16.7	15.7	13.7	15.3	+1.6
Smoke marijuana occasionally	36.5	36.9	40.6	39.6	35.6	30.1	25.6	25.9	24.7	24.4	23.9	23.4	23.5	+0.1
Smoke marijuana regularly	77.5	77.8	78.6	76.5	72.5	65.0	60.8	59.9	58.1	58.5	57.4	58.3	57.4	-0.9
Try LSD once or twice	46.0	44.7	46.6	42.3	39.5	38.8	36.4	36.2	34.7	37.4	34.9	34.3	33.2	-1.1
Take LSD regularly	84.3	84.5	84.3	81.8	79.4	79.1	78.1	77.8	76.6	76.5	76.1	75.9	74.1	-1.7
Try PCP once or twice	56.6	55.2	51.7	54.8	50.8	51.5	49.1	51.0	48.8	46.8	44.8	45.0	46.2	+1.3
Try MDMA (Ecstasy) once or twice	—	—	—	—	—	—	—	—	33.8	34.5	35.0	37.9	45.7	+7.7sss
Try cocaine once or twice	54.9	59.4	59.4	56.8	57.6	57.2	53.7	54.2	53.6	54.6	52.1	51.1	50.7	-0.4
Take cocaine occasionally	71.8	73.9	75.5	75.1	73.3	73.7	70.8	72.1	72.4	70.1	70.1	69.5	69.9	+0.4
Take cocaine regularly	90.2	91.1	90.4	90.2	90.1	89.3	87.9	88.3	87.1	86.3	85.8	86.2	84.1	-2.1
Try crack once or twice	62.9	64.3	60.6	62.4	57.6	58.4	54.6	56.0	54.0	52.2	48.2	48.4	49.4	+1.0
Take crack occasionally	75.3	80.4	76.5	76.3	73.9	73.8	72.8	71.4	70.3	68.7	67.3	65.8	65.4	-0.4
Take crack regularly	85.6	91.6	90.1	89.3	87.5	89.6	88.6	88.0	86.2	85.3	85.4	85.3	85.8	+0.4
Try cocaine powder once or twice	53.8	53.9	53.6	57.1	53.2	55.4	52.0	53.2	51.4	48.5	46.1	47.0	49.0	+2.0
Take cocaine powder occasionally	65.8	71.1	69.8	70.8	68.6	70.6	69.1	68.8	67.7	65.4	64.2	64.7	63.2	-1.5
Take cocaine powder regularly	83.9	90.2	88.9	88.4	87.0	88.6	87.8	86.8	86.0	84.1	84.6	85.5	84.4	-1.1
Try heroin once or twice	53.8	55.4	55.2	50.9	50.7	52.8	50.9	52.5	56.7	57.8	56.0	54.2	55.6	+1.3
Take heroin occasionally	75.5	76.6	74.9	74.2	72.0	72.1	71.0	74.8	76.3	76.9	77.3	74.6	75.9	+1.4
Take heroin regularly	89.5	90.2	89.6	89.2	88.3	88.0	87.2	89.5	88.9	89.1	89.9	89.2	88.3	-0.9
Try heroin once or twice without using a needle	—	—	—	—	—	—	55.6	58.6	60.5	59.6	58.5	61.6	60.7	-0.9
Take heroin occasionally without using a needle	—	—	—	—	—	—	71.2	71.0	74.3	73.4	73.6	74.7	74.4	-0.4
Try amphetamines once or twice	32.8	32.2	36.3	32.6	31.3	31.4	28.8	30.8	31.0	35.3	32.2	32.6	34.7	+2.0
Take amphetamines regularly	71.2	71.2	74.1	72.4	69.9	67.0	65.9	66.8	66.0	67.7	66.4	66.3	67.1	+0.8
Try crystal meth. (ice) once or twice	—	—	61.6	61.9	57.5	58.3	54.4	55.3	54.4	52.7	51.2	51.3	52.7	+1.4
Try barbiturates once or twice	32.2	32.4	35.1	32.2	29.2	29.9	26.3	29.1	26.9	29.0	26.1	25.0	25.7	+0.7
Take barbiturates regularly	70.5	70.2	70.5	70.2	66.1	63.3	61.6	60.4	56.8	56.3	54.1	52.3	50.3	-2.0
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	6.0	8.3	9.1	8.6	8.2	7.6	5.9	7.3	6.7	8.0	8.3	6.4	8.7	+2.3s
Take one or two drinks nearly every day	28.5	31.3	32.7	30.6	28.2	27.0	24.8	25.1	24.8	24.3	21.8	21.7	23.4	+1.7
Take four or five drinks nearly every day	69.8	70.9	69.5	70.5	67.8	66.2	62.8	65.6	63.0	62.1	61.1	59.9	60.7	+0.8
Have five or more drinks once or twice each weekend	44.0	47.1	48.6	49.0	48.3	46.5	45.2	49.5	43.0	42.8	43.1	42.7	43.6	+0.8
Smoke one or more packs of cigarettes per day	67.2	68.2	69.4	69.2	69.5	67.6	65.6	68.2	68.7	70.8	70.8	73.1	73.3	+0.2
Use smokeless tobacco regularly	32.9	34.2	37.4	35.5	38.9	36.6	33.2	37.4	38.6	40.9	41.1	42.2	45.4	+3.3
Take steroids	63.8	69.9	65.6	70.7	69.1	66.1	66.4	67.6	67.2	68.1	62.1	57.9	58.9	+1.0
Approx. N =	*2796*	*2553*	*2549*	*2684*	*2759*	*2591*	*2603*	*2449*	*2579*	*2564*	*2306*	*2130*	*2173*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 8-3
Trends in Disapproval of Drug Use by Eighth and Tenth Graders, 1991–2001

Percentage who "disapprove" or "strongly disapprove"[a]

Q. Do you disapprove of people who . . .	8th Grade 1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	10th Grade 1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Try marijuana once or twice	84.6	82.1	79.2	72.9	70.7	67.5	67.6	69.0	70.7	72.5	72.4	0.0	74.6	74.8	70.3	62.4	59.8	55.5	54.1	56.0	56.2	54.9	54.8	-0.1
Smoke marijuana occasionally	89.5	88.1	85.7	80.9	79.7	76.5	78.1	78.4	79.3	80.6	80.6	0.0	83.7	83.6	79.4	72.3	70.0	66.9	66.2	67.3	68.2	67.2	66.2	-1.0
Smoke marijuana regularly	92.1	90.8	88.9	85.3	85.1	82.8	84.6	84.5	84.5	85.3	84.5	-0.8	90.4	90.0	87.4	82.2	81.1	79.7	79.7	80.1	79.8	79.1	78.0	-1.1
Try inhalants once or twice[b]	84.9	84.0	82.5	81.6	81.8	82.9	84.1	83.0	85.2	85.4	86.6	+1.3	85.2	85.6	84.8	84.9	84.5	86.0	86.9	85.6	88.4	87.5	87.8	+0.3
Take inhalants regularly[b]	90.6	90.0	88.9	88.1	88.8	89.3	90.3	89.5	90.3	90.2	90.5	+0.3	91.0	91.5	90.9	91.0	90.9	91.7	91.7	91.1	92.4	91.8	91.3	-0.4
Try LSD once or twice[c]	—	—	77.1	75.2	71.6	70.9	72.1	69.1	69.4	66.7	64.6	-2.1	—	—	82.1	79.3	77.9	76.8	76.6	76.7	77.8	77.0	75.4	-1.6
Take LSD regularly[c]	—	—	79.8	78.4	75.8	75.3	76.3	72.5	72.5	69.3	67.0	-2.3	—	—	86.8	85.6	84.8	84.5	83.4	82.9	84.3	82.1	80.8	-1.3
Try MDMA (Ecstasy) once or twice[d]	—	—	—	—	—	—	—	—	—	—	69.0	—	—	—	—	—	—	—	—	—	—	—	72.6	—
Take MDMA (Ecstasy) occasionally[d]	—	—	—	—	—	—	—	—	—	—	73.6	—	—	—	—	—	—	—	—	—	—	—	81.0	—
Try crack once or twice[b]	91.7	90.7	89.1	86.9	85.9	85.0	85.7	85.4	86.0	85.4	86.0	+0.6	92.5	92.5	91.4	89.9	88.7	88.2	87.4	87.1	87.8	87.1	86.9	-0.2
Take crack occasionally[b]	93.3	92.5	91.7	89.9	89.8	89.3	90.3	89.5	89.9	88.8	89.8	+0.9	94.3	94.4	93.6	92.5	91.7	91.9	91.0	90.6	91.5	90.9	90.6	-0.3
Try cocaine powder once or twice[b]	91.2	89.6	88.5	86.1	85.3	83.9	85.1	84.5	85.2	84.8	85.6	+0.8	90.8	91.1	90.0	88.1	86.8	86.1	85.1	84.9	86.0	84.8	85.3	+0.5
Take cocaine powder occasionally[b]	93.1	92.4	91.6	89.7	89.7	88.7	90.1	89.3	89.9	88.8	89.6	+0.8	94.0	94.0	93.2	92.1	91.4	91.1	90.4	89.7	90.7	89.9	90.2	+0.3
Try heroin once or twice without using a needle[c]	—	—	—	—	85.8	85.0	87.7	87.3	88.0	87.2	87.2	0.0	—	—	—	—	89.7	89.5	89.1	88.7	90.1	90.1	89.1	-1.0
Take heroin occasionally without using a needle[c]	—	—	—	—	88.5	87.7	90.1	89.6	90.2	88.9	88.9	-0.1	—	—	—	—	91.6	91.7	91.4	90.5	91.8	92.3	90.8	-1.5
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	51.7	52.2	50.9	47.8	48.0	45.5	45.7	47.5	48.3	48.7	49.8	+1.1	37.6	39.9	38.5	36.5	36.1	34.2	33.7	34.7	35.1	33.4	34.7	+1.3
Take one or two drinks nearly every day	82.2	81.0	79.6	76.7	75.9	74.1	76.6	76.9	77.0	77.8	77.4	-0.4	81.7	81.7	78.6	75.2	75.4	73.8	75.4	74.6	75.4	73.8	73.8	0.0
Have five or more drinks once or twice each weekend	85.2	83.9	83.3	80.7	80.7	79.1	81.3	81.0	80.3	81.2	81.6	+0.3	76.7	77.6	74.7	72.3	72.2	70.7	70.2	70.5	69.9	68.2	69.2	+1.0
Smoke one or more packs of cigarettes per day[e]	82.8	82.3	80.6	78.4	78.6	77.3	80.3	80.0	81.4	81.9	83.5	+1.6	79.4	77.8	76.5	73.9	73.2	71.6	73.8	75.3	76.1	76.7	78.2	+1.5
Use smokeless tobacco regularly	79.1	77.2	77.1	75.1	74.0	74.1	76.5	76.3	78.0	79.2	79.4	+0.2	75.4	74.6	73.8	71.2	71.0	71.0	72.3	73.2	75.1	75.8	76.1	+0.3
Take steroids[f]	89.8	90.3	89.9	87.9	—	—	—	—	—	—	—	—	90.0	91.0	91.2	90.8	—	—	—	—	—	—	—	—
Approx. N (in thousands) =	*17.4*	*18.5*	*18.4*	*17.4*	*17.6*	*18.0*	*18.8*	*18.1*	*16.7*	*16.7*	*16.2*		*14.8*	*14.8*	*15.3*	*15.9*	*17.0*	*15.7*	*15.6*	*15.0*	*13.6*	*14.3*	*14.0*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, (3) Strongly disapprove, and (4) Can't say, drug unfamiliar.

[b] Beginning in 1997, data based on two-thirds of N indicated due to changes in questionnaire forms.

[c] Data based on one of two forms in 1993–96; N is one-half of N indicated. Beginning in 1997, data based on one-third of N indicated due to changes in questionnaire forms.

[d] Data based on one-third of N indicated due to changes in questionnaire forms.

[e] Beginning in 1999, data based on two-thirds of N indicated due to changes in questionnaire forms.

[f] Data based on two forms in 1991 and 1992 and on one of two forms in 1993 and 1994; N is one-half of N indicated.

TABLE 8-4
Long-Term Trends in Disapproval of Drug Use by Twelfth Graders

	Percentage "disapproving"[b]													
	12th Grade													
Q. *Do you disapprove of people (who are 18 or older) doing each of the following?*[a]	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988
Try marijuana once or twice	47.0	38.4	33.4	33.4	34.2	39.0	40.0	45.5	46.3	49.3	51.4	54.6	56.6	60.8
Smoke marijuana occasionally	54.8	47.8	44.3	43.5	45.3	49.7	52.6	59.1	60.7	63.5	65.8	69.0	71.6	74.0
Smoke marijuana regularly	71.9	69.5	65.5	67.5	69.2	74.6	77.4	80.6	82.5	84.7	85.5	86.6	89.2	89.3
Try LSD once or twice	82.8	84.6	83.9	85.4	86.6	87.3	86.4	88.8	89.1	88.9	89.5	89.2	91.6	89.8
Take LSD regularly	94.1	95.3	95.8	96.4	96.9	96.7	96.8	96.7	97.0	96.8	97.0	96.6	97.8	96.4
Try MDMA (Ecstasy) once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cocaine once or twice	81.3	82.4	79.1	77.0	74.7	76.3	74.6	76.6	77.0	79.7	79.3	80.2	87.3	89.1
Take cocaine regularly	93.3	93.9	92.1	91.9	90.8	91.1	90.7	91.5	93.2	94.5	93.8	94.3	96.7	96.2
Try crack once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take crack occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take crack regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try cocaine powder once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take cocaine powder occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take cocaine powder regularly	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try heroin once or twice	91.5	92.6	92.5	92.0	93.4	93.5	93.5	94.6	94.3	94.0	94.0	93.3	96.2	95.0
Take heroin occasionally	94.8	96.0	96.0	96.4	96.8	96.7	97.2	96.9	96.9	97.1	96.8	96.6	97.9	96.9
Take heroin regularly	96.7	97.5	97.2	97.8	97.9	97.6	97.8	97.5	97.7	98.0	97.6	97.6	98.1	97.2
Try heroin once or twice without using a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Take heroin occasionally without using a needle	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Try amphetamines once or twice twice	74.8	75.1	74.2	74.8	75.1	75.4	71.1	72.6	72.3	72.8	74.9	76.5	80.7	82.5
Take amphetamines regularly	92.1	92.8	92.5	93.5	94.4	93.0	91.7	92.0	92.6	93.6	93.3	93.5	95.4	94.2
Try barbiturates once or twice	77.7	81.3	81.1	82.4	84.0	83.9	82.4	84.4	83.1	84.1	84.9	86.8	89.6	89.4
Take barbiturates regularly	93.3	93.6	93.0	94.3	95.2	95.4	94.2	94.4	95.1	95.1	95.5	94.9	96.4	95.3
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	21.6	18.2	15.6	15.6	15.8	16.0	17.2	18.2	18.4	17.4	20.3	20.9	21.4	22.6
Take one or two drink nearly every day	67.6	68.9	66.8	67.7	68.3	69.0	69.1	69.9	68.9	72.9	70.9	72.8	74.2	75.0
Take four or five drinks nearly every day	88.7	90.7	88.4	90.2	91.7	90.8	91.8	90.9	90.0	91.0	92.0	91.4	92.2	92.8
Have five or more drinks once or twice each weekend	60.3	58.6	57.4	56.2	56.7	55.6	55.5	58.8	56.6	59.6	60.4	62.4	62.0	65.3
Smoke one or more packs of cigarettes per day	67.5	65.9	66.4	67.0	70.3	70.8	69.9	69.4	70.8	73.0	72.3	75.4	74.3	73.1
Take steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—
Approx. N =	*2677*	*2957*	*3085*	*3686*	*3221*	*3261*	*3610*	*3651*	*3341*	*3254*	*3265*	*3113*	*3302*	*3311*

[a] The 1975 question asked about people who are "20 or older."

[b] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

(Table continued on next page)

TABLE 8-4 (cont.)
Long-Term Trends in Disapproval of Drug Use by Twelfth Graders

	Percentage "disapproving"[b]													
	12th Grade													
Q. *Do you disapprove of people (who are 18 or older) doing each of the following?*[a]	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Try marijuana once or twice	64.6	67.8	68.7	69.9	63.3	57.6	56.7	52.5	51.0	51.6	48.8	52.5	49.1	-3.4
Smoke marijuana occasionally	77.2	80.5	79.4	79.7	75.5	68.9	66.7	62.9	63.2	64.4	62.5	65.8	63.2	-2.7
Smoke marijuana regularly	89.8	91.0	89.3	90.1	87.6	82.3	81.9	80.0	78.8	81.2	78.6	79.7	79.3	-0.4
Try LSD once or twice	89.7	89.8	90.1	88.1	85.9	82.5	81.1	79.6	80.5	82.1	83.0	82.4	81.8	-0.6
Take LSD regularly	96.4	96.3	96.4	95.5	95.8	94.3	92.5	93.2	92.9	93.5	94.3	94.2	94.0	-0.2
Try MDMA (Ecstasy) once or twice	—	—	—	—	—	—	—	—	82.2	82.5	82.1	81.0	79.5	-1.5
Try cocaine once or twice	90.5	91.5	93.6	93.0	92.7	91.6	90.3	90.0	88.0	89.5	89.1	88.2	88.1	-0.1
Take cocaine regularly	96.4	96.7	97.3	96.9	97.5	96.6	96.1	95.6	96.0	95.6	94.9	95.5	94.9	-0.6
Try crack once or twice	—	92.3	92.1	93.1	89.9	89.5	91.4	87.4	87.0	86.7	87.6	87.5	87.0	-0.5
Take crack occasionally	—	94.3	94.2	95.0	92.8	92.8	94.0	91.2	91.3	90.9	92.3	91.9	91.6	-0.3
Take crack regularly	—	94.9	95.0	95.5	93.4	93.1	94.1	93.0	92.3	91.9	93.2	92.8	92.2	-0.6
Try cocaine powder once or twice	—	87.9	88.0	89.4	86.6	87.1	88.3	83.1	83.0	83.1	84.3	84.1	83.3	-0.8
Take cocaine powder occasionally	—	92.1	93.0	93.4	91.2	91.0	92.7	89.7	89.3	88.7	90.0	90.3	89.8	-0.5
Take cocaine powder regularly	—	93.7	94.4	94.3	93.0	92.5	93.8	92.9	91.5	91.1	92.3	92.6	92.5	-0.1
Try heroin once or twice	95.4	95.1	96.0	94.9	94.4	93.2	92.8	92.1	92.3	93.7	93.5	93.0	93.1	+0.1
Take heroin occasionally	97.2	96.7	97.3	96.8	97.0	96.2	95.7	95.0	95.4	96.1	95.7	96.0	95.4	-0.6
Take heroin regularly	97.4	97.5	97.8	97.2	97.5	97.1	96.4	96.3	96.4	96.6	96.4	96.6	96.2	-0.4
Try heroin once or twice without using a needle	—	—	—	—	—	—	92.9	90.8	92.3	93.0	92.6	94.0	91.7	-2.3s
Take heroin occasionally without using a needle	—	—	—	—	—	—	94.7	93.2	94.4	94.3	93.8	95.2	93.5	-1.7s
Try amphetamines once or twice twice	83.3	85.3	86.5	86.9	84.2	81.3	82.2	79.9	81.3	82.5	81.9	82.1	82.3	+0.2
Take amphetamines regularly	94.2	95.5	96.0	95.6	96.0	94.1	94.3	93.5	94.3	94.0	93.7	94.1	93.4	-0.7
Try barbiturates once or twice	89.3	90.5	90.6	90.3	89.7	87.5	87.3	84.9	86.4	86.0	86.6	85.9	85.9	0.0
Take barbiturates regularly	95.3	96.4	97.1	96.5	97.0	96.1	95.2	94.8	95.3	94.6	94.7	95.2	94.5	-0.7
Try one or two drinks of an alcoholic beverage (beer, wine, liquor)	27.3	29.4	29.8	33.0	30.1	28.4	27.3	26.5	26.1	24.5	24.6	25.2	26.6	+1.4
Take one or two drink nearly every day	76.5	77.9	76.5	75.9	77.8	73.1	73.3	70.8	70.0	69.4	67.2	70.0	69.2	-0.9
Take four or five drinks nearly every day	91.6	91.9	90.6	90.8	90.6	89.8	88.8	89.4	88.6	86.7	86.9	88.4	86.4	-2.0
Have five or more drinks once or twice each weekend	66.5	68.9	67.4	70.7	70.1	65.1	66.7	64.7	65.0	63.8	62.7	65.2	62.9	-2.3
Smoke one or more packs of cigarettes per day	72.4	72.8	71.4	73.5	70.6	69.8	68.2	67.2	67.1	68.8	69.5	70.1	71.6	+1.5
Take steroids	—	90.8	90.5	92.1	92.1	91.9	91.0	91.7	91.4	90.8	88.9	88.8	86.4	-2.4s
Approx. N =	*2799*	*2566*	*2547*	*2645*	*2723*	*2588*	*2603*	*2399*	*2601*	*2545*	*2310*	*2150*	*2144*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available. Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 8-5

Trends in Twelfth Graders' Attitudes Regarding Legality of Drug Use

Q. *Do you think that people (who are 18 or older) should be prohibited by law from doing each of the following?*[a]	Percentage saying "yes"[b]																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Smoke marijuana in private	32.8	27.5	26.8	25.4	28.0	28.9	35.4	36.6	37.8	41.6	44.7	43.8	47.6	51.8	51.5	56.0	51.6	52.4	48.0	42.9	44.0	40.4	38.8	39.8	39.3	38.8	39.1	+0.3
Smoke marijuana in public places	63.1	59.1	58.7	59.5	61.8	66.1	67.4	72.8	73.6	75.2	78.2	78.9	79.7	81.3	80.0	81.9	79.8	78.3	77.3	72.5	72.9	70.0	69.4	72.2	71.5	72.1	68.3	-3.9s
Take LSD in private	67.2	65.1	63.3	62.7	62.4	65.8	62.6	67.1	66.7	67.9	70.6	69.0	70.8	71.5	71.6	72.9	68.1	67.2	63.5	63.2	64.3	62.0	61.2	64.7	62.6	62.9	63.1	+0.2
Take LSD in public places	85.8	81.9	79.3	80.7	81.5	82.8	80.7	82.1	82.8	82.4	84.8	84.9	85.2	86.0	84.4	84.9	83.9	82.2	82.1	80.5	81.5	79.2	80.3	82.7	80.4	80.4	78.8	-1.5
Take heroin in private	76.3	72.4	69.2	68.8	68.5	70.3	68.8	69.3	69.7	69.8	73.3	71.7	75.0	74.2	74.4	76.4	72.8	71.4	70.7	70.1	72.2	70.8	70.6	73.9	72.9	71.1	70.6	-0.5
Take heroin in public places	90.1	84.8	81.0	82.5	84.0	83.8	82.4	82.5	83.7	83.4	85.8	85.0	86.2	86.6	85.2	86.7	85.4	83.3	84.5	82.9	84.8	82.3	84.3	86.4	84.2	83.9	81.7	-2.3
Take amphetamines or barbiturates in private	57.2	53.5	52.8	52.2	53.4	54.1	52.0	53.5	52.8	54.4	56.3	56.8	59.1	60.2	61.1	64.5	59.7	60.5	57.4	55.7	57.5	54.6	54.6	58.5	55.1	56.0	55.9	-0.2
Take amphetamines or barbiturates in public places	79.6	76.1	73.7	75.8	77.3	76.1	74.2	75.5	76.7	76.8	78.3	79.1	79.8	80.2	79.2	81.6	79.7	78.5	78.0	76.4	77.6	74.3	76.5	77.4	76.1	75.4	74.5	-0.9
3 Get drunk in private	14.1	15.6	18.6	17.4	16.8	16.7	19.6	19.4	19.9	19.7	19.8	18.5	18.6	19.2	20.2	23.0	22.0	24.4	22.1	21.0	21.6	21.4	20.5	20.2	20.5	21.5	22.6	+1.1
2 3 Get drunk in public places	55.7	50.7	49.0	50.3	50.4	48.3	49.1	50.7	52.2	51.1	53.1	52.2	53.2	53.8	52.6	54.6	54.3	54.1	53.6	54.3	54.5	52.8	51.7	51.2	52.8	51.9	50.6	-1.2
Smoke cigarettes in certain specified public places	—	—	42.0	42.2	43.1	42.8	43.0	42.0	40.5	39.2	42.8	45.1	44.4	48.4	44.5	47.3	44.9	47.6	45.9	47.3	45.1	43.4	41.3	41.1	43.2	45.1	44.2	-0.9
Approx. N =	*2620*	*2959*	*3113*	*3783*	*3288*	*3224*	*3611*	*3627*	*3315*	*3236*	*3254*	*3074*	*3332*	*3288*	*2813*	*2571*	*2512*	*2671*	*2759*	*2603*	*2578*	*2422*	*2587*	*2563*	*2283*	*2146*	*2161*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] The 1975 question asked about people who are "20 or older."

[b] Answer alternatives were: (1) No, (2) Not sure, and (3) Yes.

TABLE 8-6

Trends in Twelfth Graders' Attitudes Regarding Marijuana Laws

(Entries are percentages)

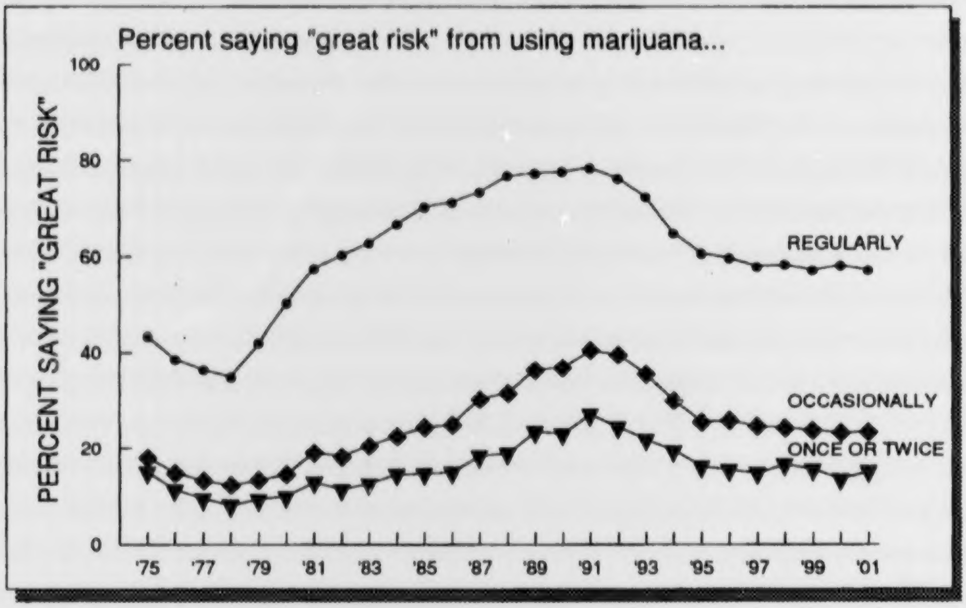
Q. There has been a great deal of public debate about whether marijuana use should be legal. Which of the following policies would you favor?	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
Using marijuana should be entirely legal	27.3	32.6	33.6	32.9	32.1	26.3	23.1	20.0	18.9	18.6	16.6	14.9	15.4	16.1	16.6	15.9	18.0	18.7	22.8	26.8	30.4	31.2	30.8	27.9	27.3	31.2	29.2
It should be a minor violation like a parking ticket but not a crime	25.3	29.0	31.4	30.2	30.1	30.9	29.3	28.2	26.3	23.6	25.7	25.9	24.6	21.9	18.9	17.4	19.2	18.0	18.7	19.0	18.0	21.0	20.7	24.3	23.7	23.4	24.5
It should be a crime	30.5	25.4	21.7	22.2	24.0	26.4	32.1	34.7	36.7	40.6	40.8	42.5	45.3	49.2	50.0	53.2	48.6	47.6	43.4	39.4	37.3	33.8	34.0	32.6	32.5	30.2	31.1
Don't know	16.8	13.0	13.4	14.6	13.8	16.4	15.4	17.1	18.1	17.2	16.9	16.7	14.8	13.9	14.6	13.6	14.3	15.7	15.1	14.8	14.4	13.9	14.5	15.2	16.5	15.2	15.3
Q. If it were legal for people to USE marijuana, should it also be legal to SELL marijuana?																											
No	27.8	23.0	22.5	21.8	22.9	25.0	27.7	29.3	27.4	30.9	32.6	33.0	36.0	36.8	38.8	40.1	36.8	37.8	36.7	33.1	32.3	29.4	29.1	30.2	30.2	27.4	30.0
Yes, but only to adults	37.1	49.8	52.1	53.6	53.2	51.8	48.6	46.2	47.6	45.8	43.2	42.2	41.2	39.9	37.9	38.8	41.4	39.5	40.7	41.7	43.4	46.7	44.8	42.4	42.9	45.5	43.6
Yes, to anyone	16.2	13.3	12.7	12.0	11.3	9.6	10.5	10.7	10.5	10.6	11.2	10.4	9.2	10.5	9.2	9.6	9.4	9.6	10.1	11.6	11.7	11.1	12.5	11.9	12.1	13.4	12.0
Don't know	18.9	13.9	12.7	12.6	12.6	13.6	13.2	13.8	14.6	12.8	13.1	14.4	13.6	12.8	14.1	11.6	12.5	13.1	12.5	13.7	12.6	12.8	13.7	15.5	14.7	13.6	14.3
Q. If marijuana were legal to use and legally available, which of the following would you be most likely to do?																											
Not use it, even if it were legal and available	53.2	50.4	50.6	46.4	50.2	53.3	55.2	60.0	60.1	62.0	63.0	62.4	64.9	69.0	70.1	72.9	70.7	72.5	69.0	64.6	60.2	59.9	56.4	58.3	59.0	60.3	58.1
Try it	8.2	8.1	7.0	7.1	6.1	6.8	6.0	6.3	7.2	6.6	7.5	7.6	7.3	7.1	6.7	7.0	6.3	7.4	7.3	7.6	8.8	8.8	9.1	8.1	9.3	7.3	9.3
Use it about as often as I do now	22.7	24.7	26.8	30.9	29.1	27.3	24.8	21.7	19.8	19.1	17.7	16.8	16.2	13.1	13.0	10.1	11.7	10.2	11.9	14.3	17.1	17.2	18.4	17.9	15.2	18.5	16.8
Use it more often than I do now	6.0	7.1	7.4	6.3	6.0	4.2	4.7	3.8	4.9	4.7	3.7	5.0	4.1	4.3	2.4	2.7	3.3	3.2	3.5	4.7	4.9	4.8	6.1	5.9	6.5	5.4	6.3
Use it less often than I do now	1.3	1.5	1.5	2.7	2.5	2.6	2.5	2.2	1.5	1.6	1.6	2.0	1.3	1.5	2.1	1.1	1.6	1.0	1.4	1.5	1.6	1.6	2.0	2.0	1.9	1.6	2.2
Don't know	8.5	8.1	6.6	6.7	6.1	5.9	6.9	6.0	6.4	6.0	6.5	6.1	6.3	5.0	5.7	6.1	6.4	5.7	7.0	7.3	7.4	7.7	7.9	7.8	8.1	7.0	7.3
Approx. N =	*2600*	*2970*	*3110*	*3710*	*3280*	*3210*	*3600*	*3620*	*3300*	*3220*	*3230*	*3080*	*3330*	*3277*	*2812*	*2570*	*2515*	*2672*	*2768*	*2597*	*2574*	*2426*	*2585*	*2566*	*2285*	*2143*	*2160*

SOURCE: The Monitoring the Future Study, the University of Michigan.

FIGURE 8-1a

Trends in Perceived Harmfulness of Marijuana Use for Eighth, Tenth and Twelfth Graders

Twelfth Graders



Eighth, Tenth and Twelfth Graders

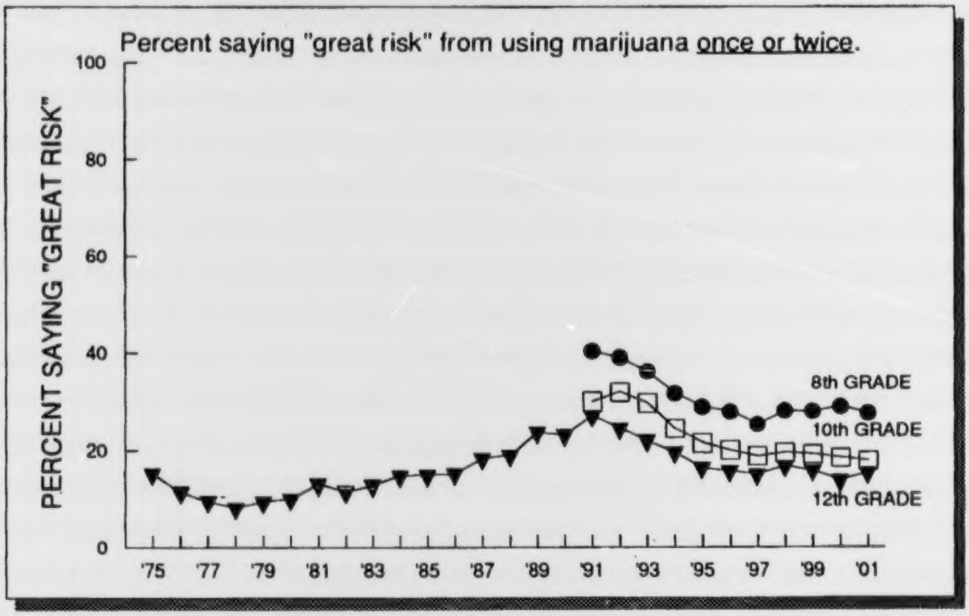
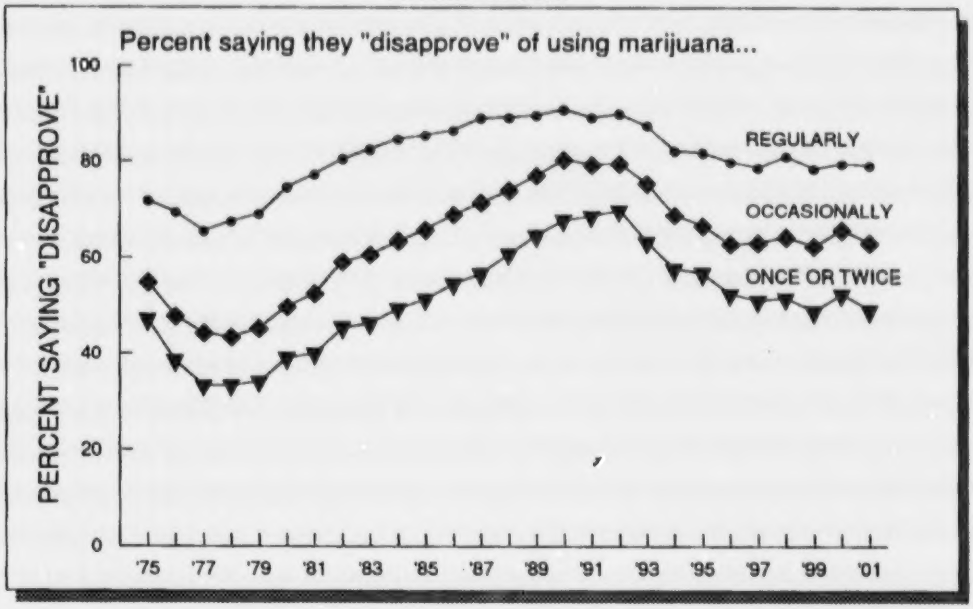


FIGURE 8-1b

Trends in Disapproval of Marijuana Use for Eighth, Tenth and Twelfth Graders

Twelfth Graders



Eighth, Tenth and Twelfth Graders

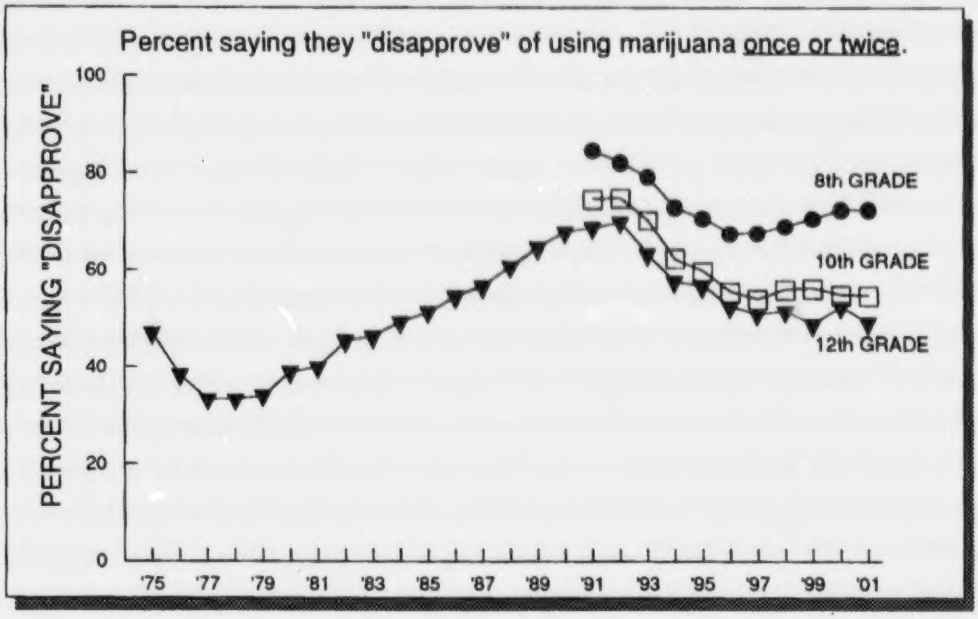
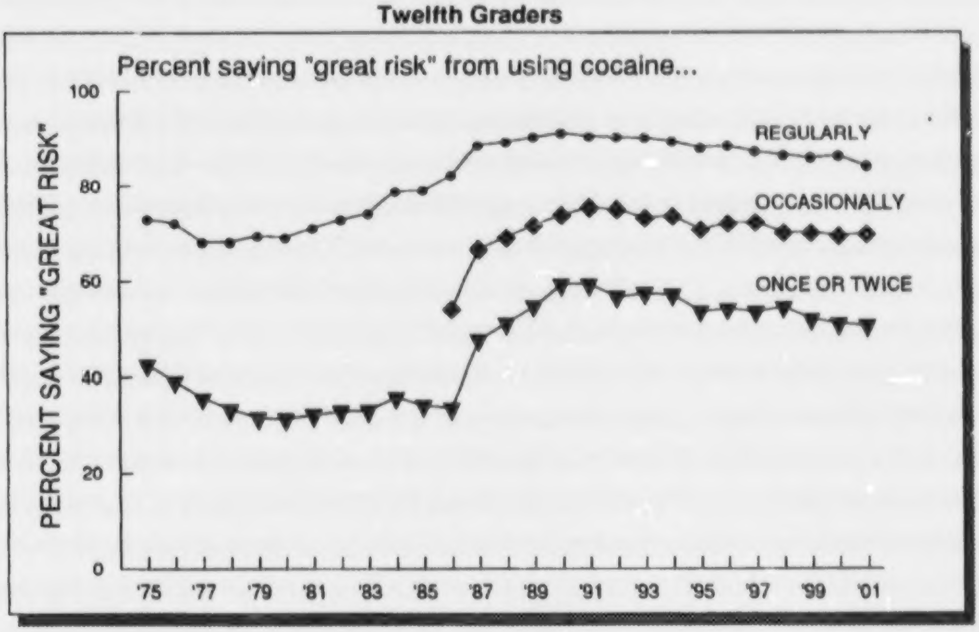


FIGURE 8-2a

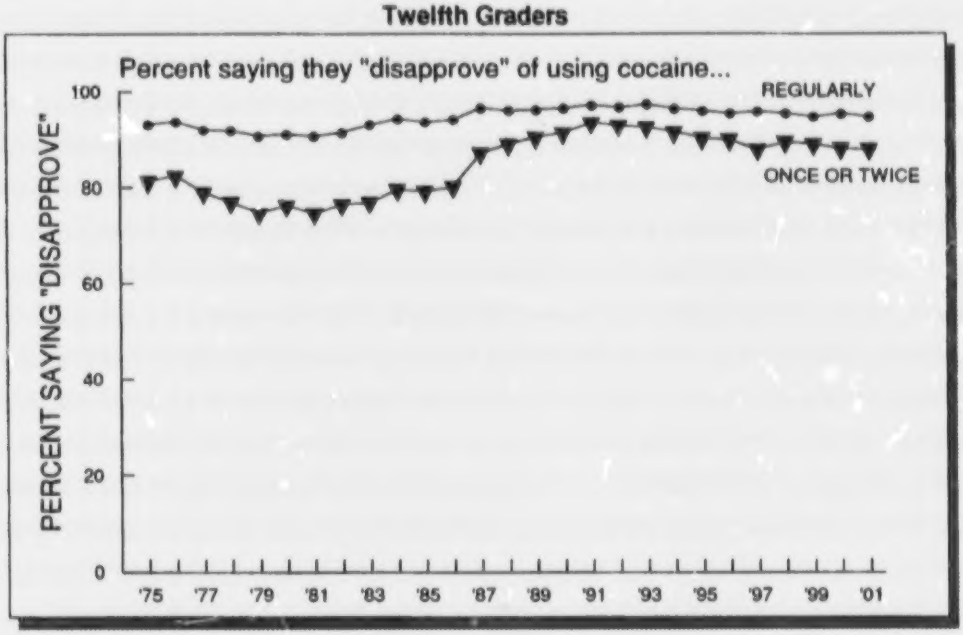
Trends in Perceived Harmfulness of Cocaine Use for Twelfth Graders



NOTE: Data not available for Eighth and Tenth graders.

FIGURE 8-2b

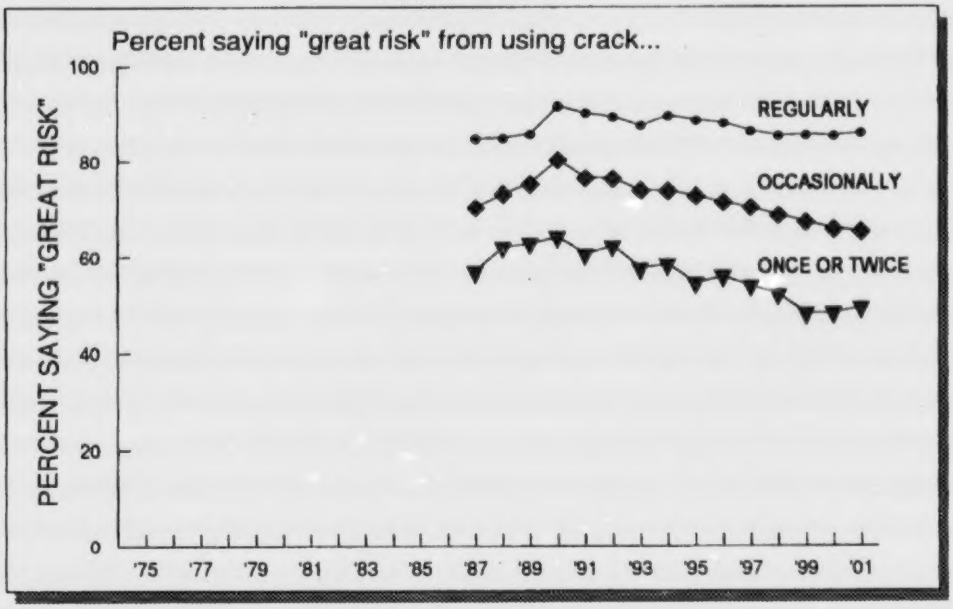
Trends in Disapproval of Cocaine Use for Twelfth Graders



NOTE: Data not available for Eighth and Tenth graders.

FIGURE 8-3a

Trends in Perceived Harmfulness of Crack Use for Eighth, Tenth and Twelfth Graders


Twelfth Graders

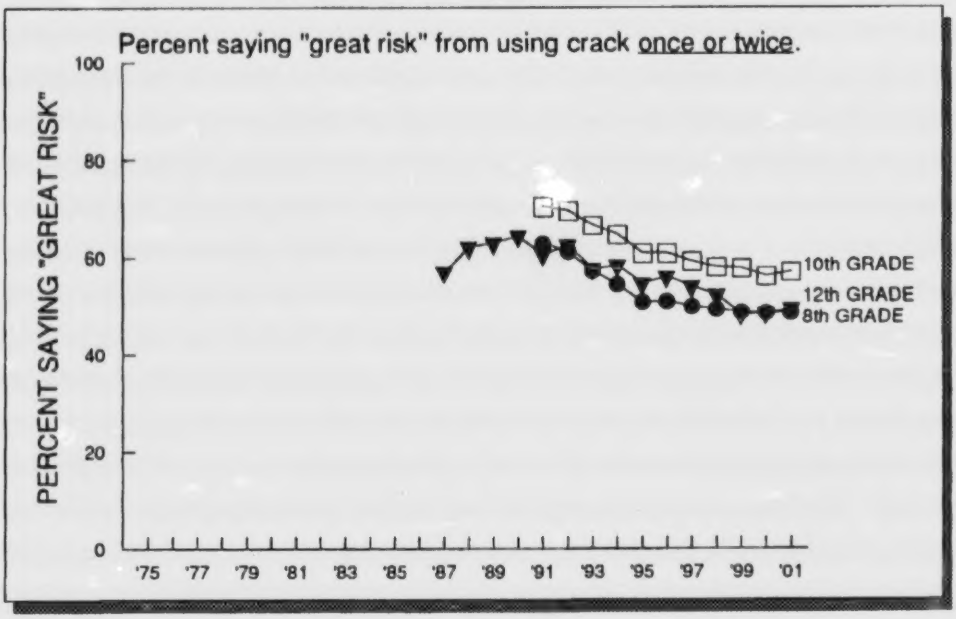
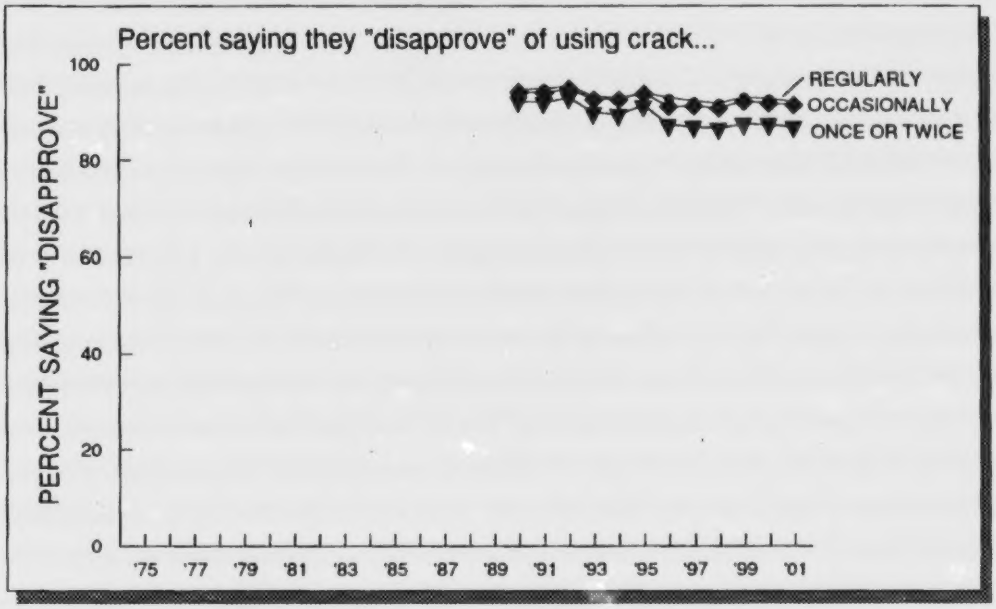

Eighth, Tenth and Twelfth Graders

FIGURE 8-3b

Trends in Disapproval of Crack Use for Eighth, Tenth and Twelfth Graders

Twelfth Graders



Eighth, Tenth and Twelfth Graders

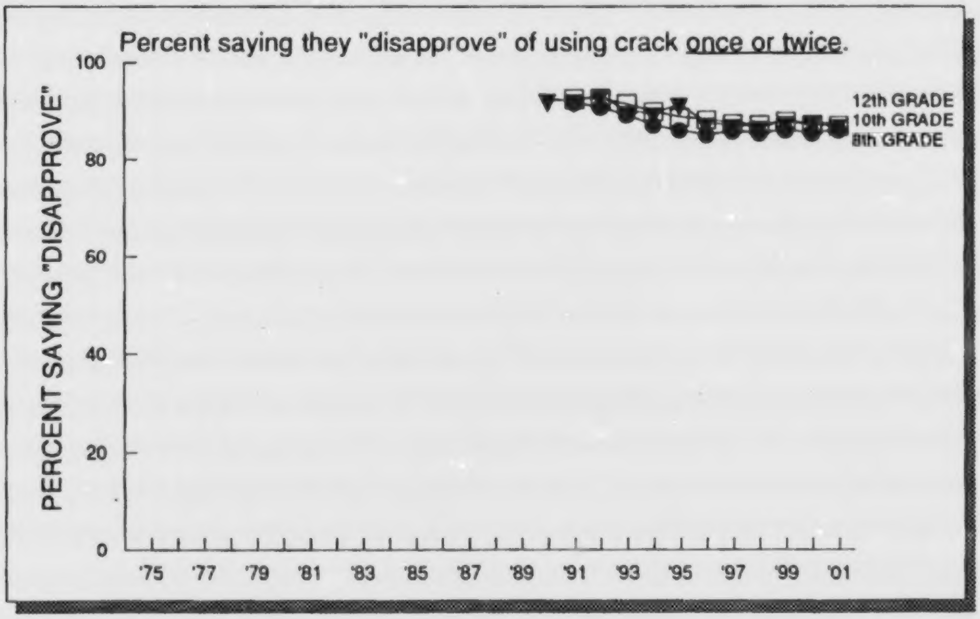


FIGURE 8-4

Marijuana: Trends in Perceived Availability, Perceived Risk of Regular Use, and Prevalence of Use in Past Thirty Days for Twelfth Graders

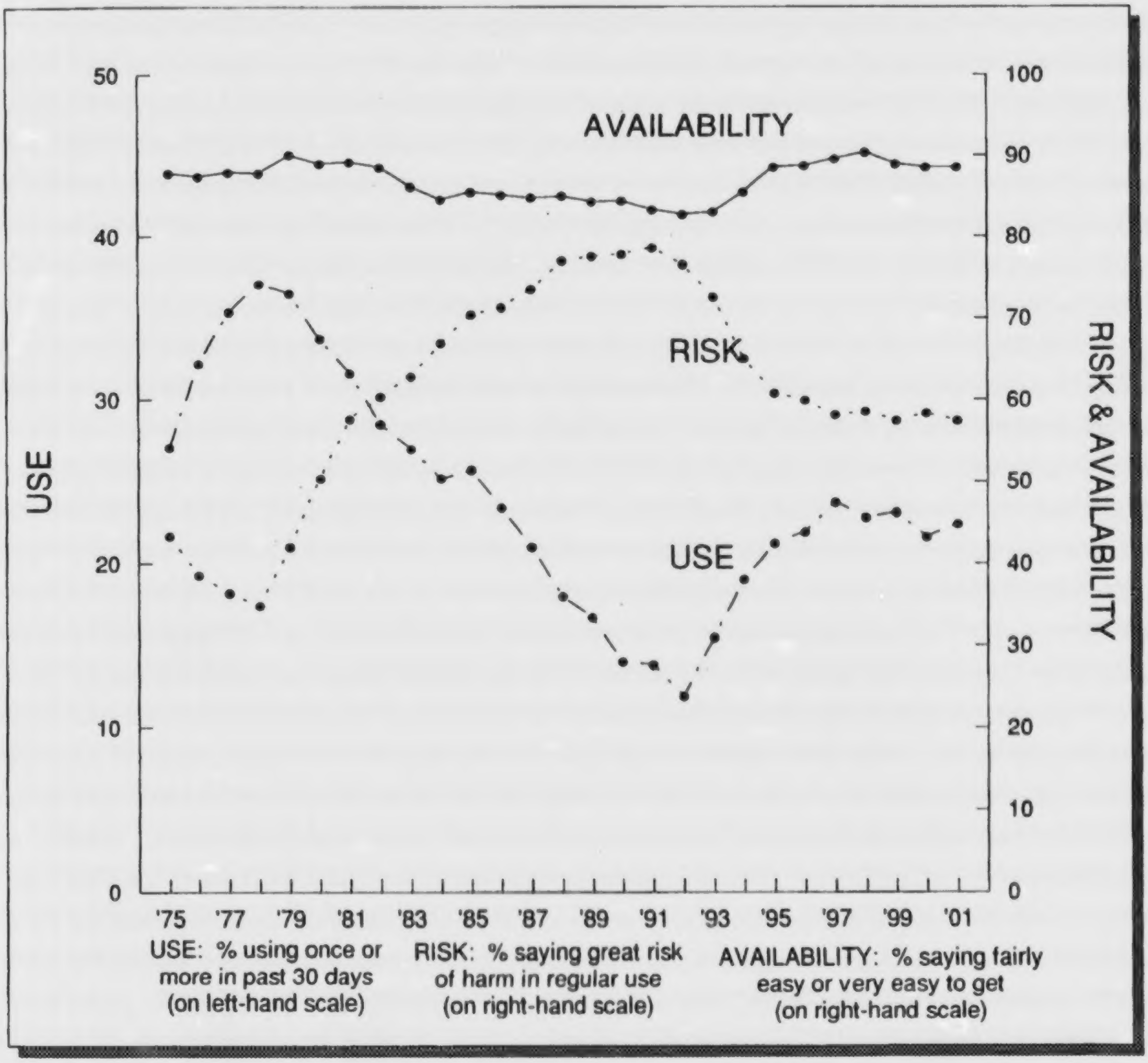
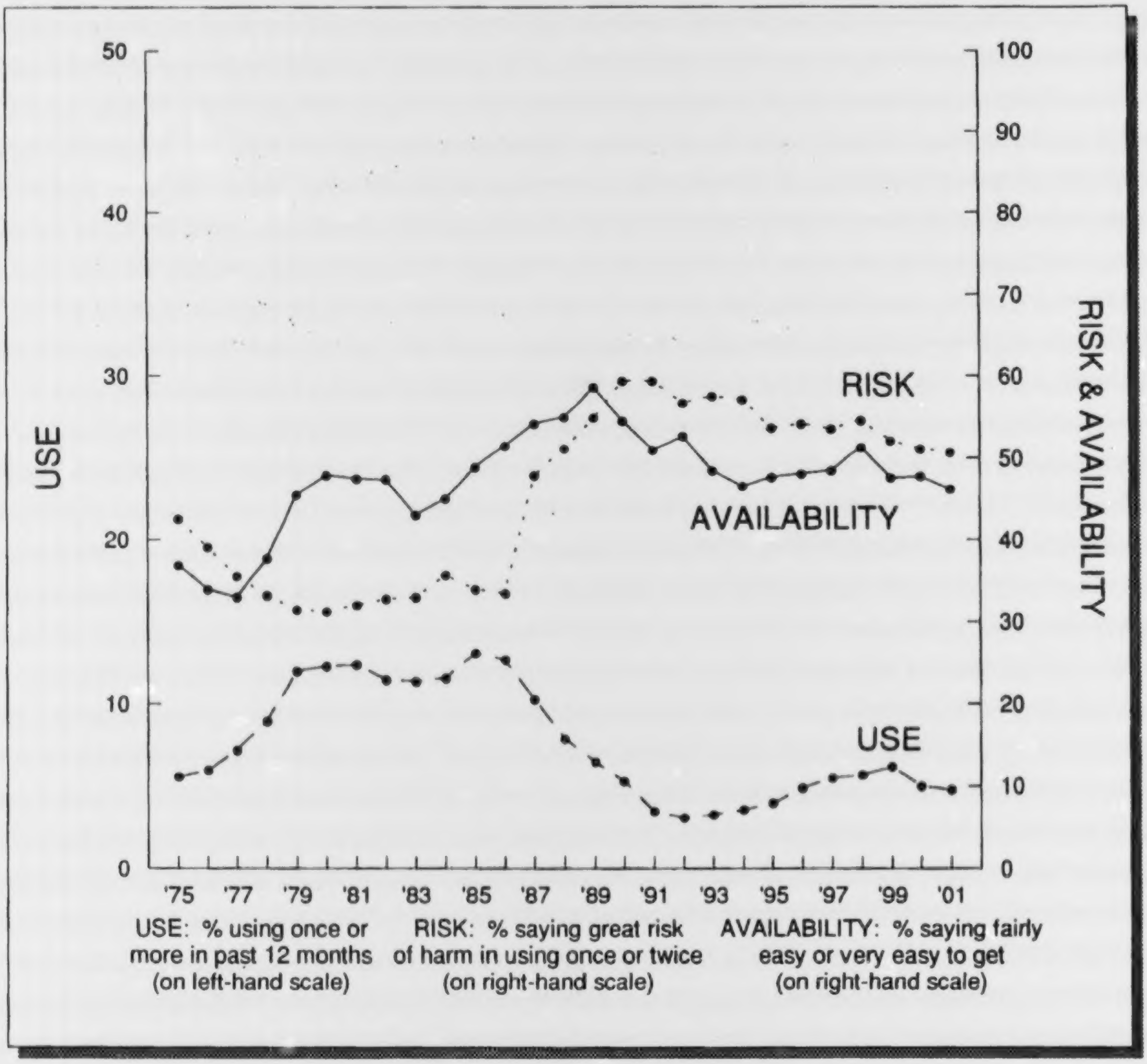


FIGURE 8-5

Cocaine: Trends in Perceived Availability, Perceived Risk of Trying, and Prevalence of Use in Past Year for Twelfth Graders



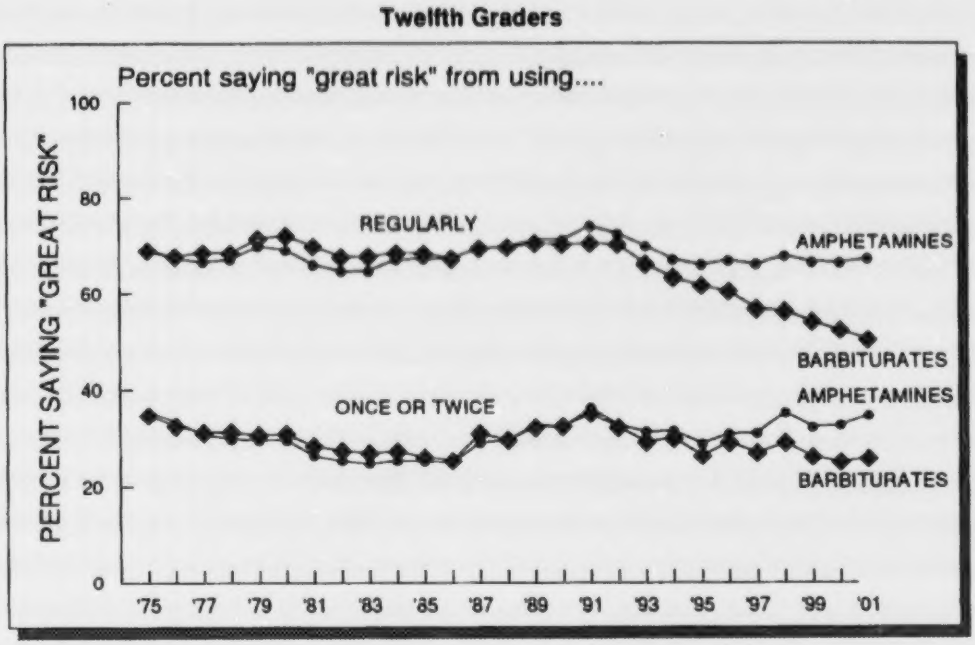
USE: % using once or more in past 12 months (on left-hand scale)

RISK: % saying great risk of harm in using once or twice (on right-hand scale)

AVAILABILITY: % saying fairly easy or very easy to get (on right-hand scale)

FIGURE 8-6a

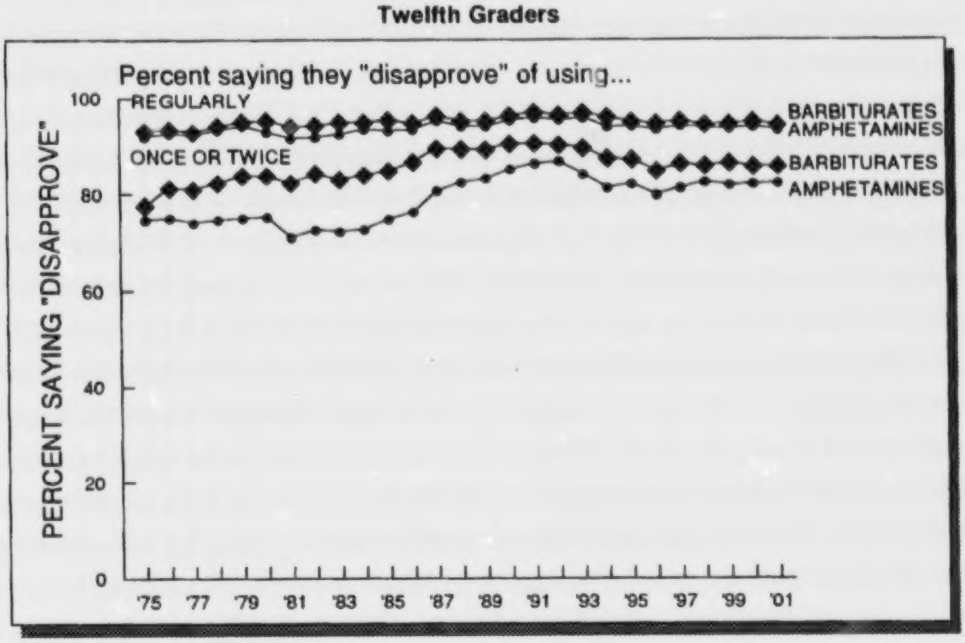
Trends in Perceived Harmfulness of Amphetamine and Barbiturate Use for Twelfth Graders



NOTE: Data not available for Eighth and Tenth graders.

FIGURE 8-6b

Trends in Disapproval of Amphetamine and Barbiturate Use for Twelfth Graders

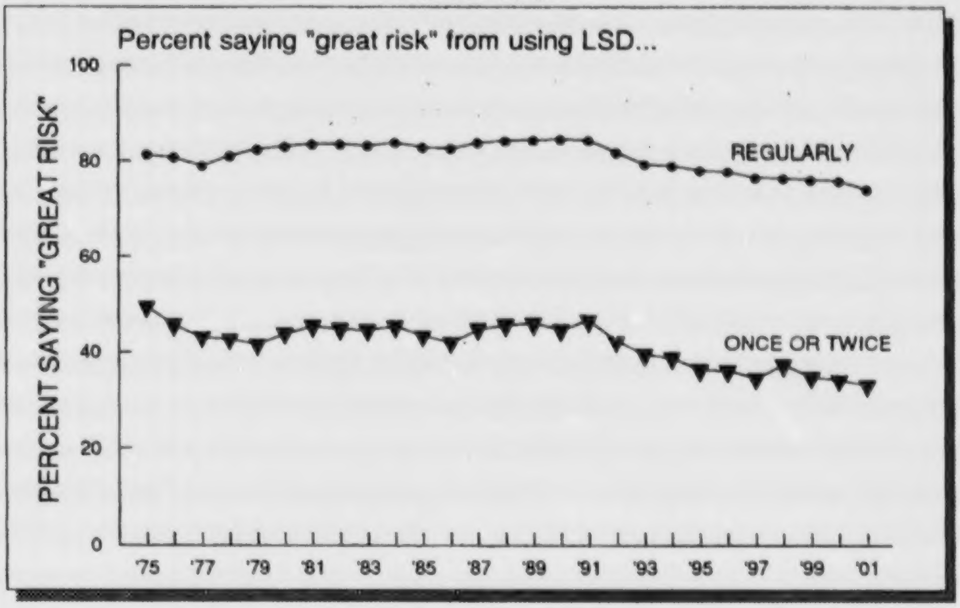


NOTE: Data not available for Eighth and Tenth graders.

FIGURE 8-7a

Trends in Perceived Harmfulness of LSD Use for Eighth, Tenth and Twelfth Graders

Twelfth Graders



Eighth, Tenth and Twelfth Graders

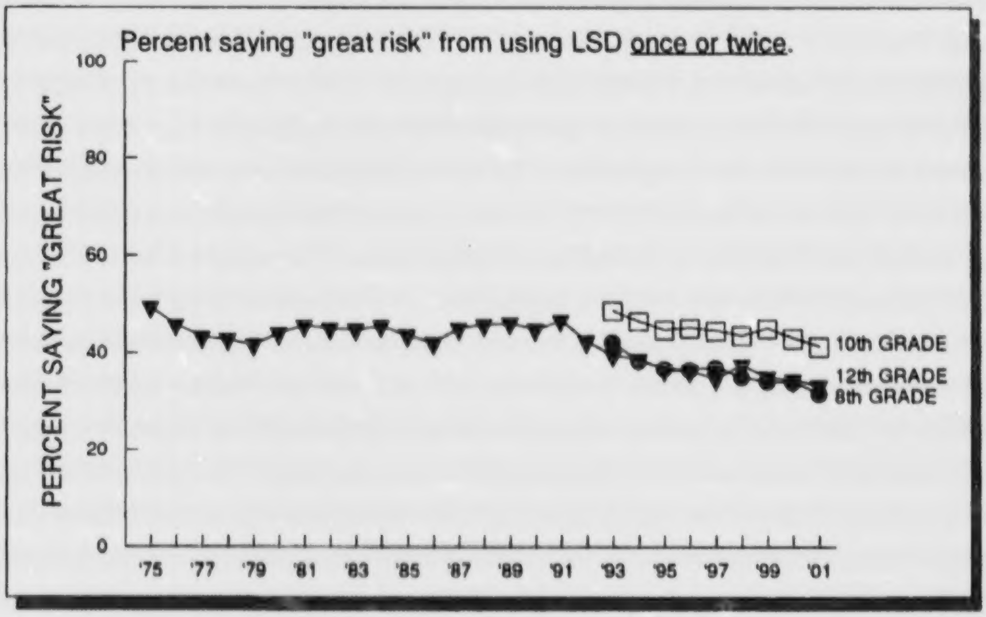
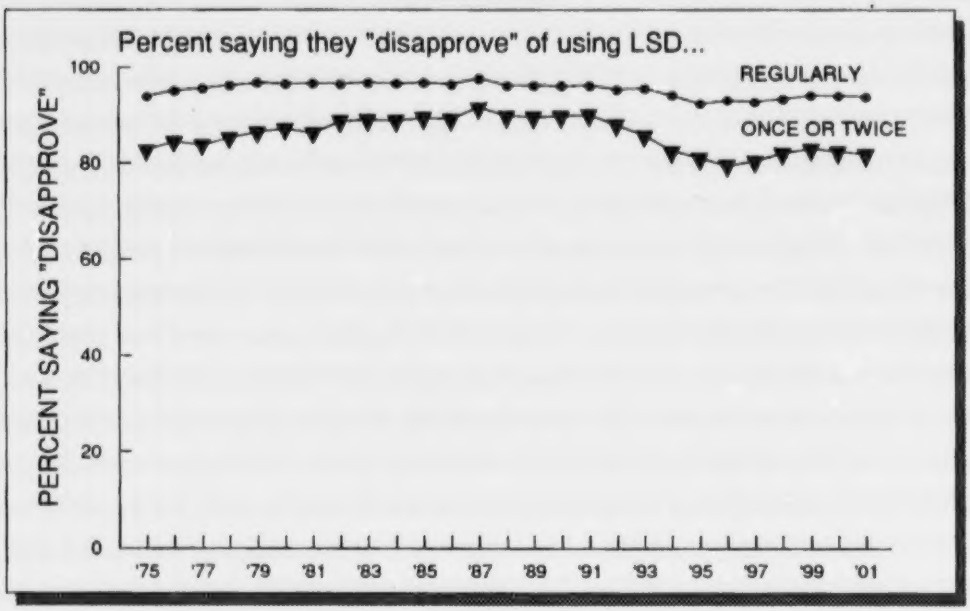


FIGURE 8-7b

Trends in Disapproval of LSD Use for Eighth, Tenth and Twelfth Graders

Twelfth Graders



Eighth, Tenth and Twelfth Graders

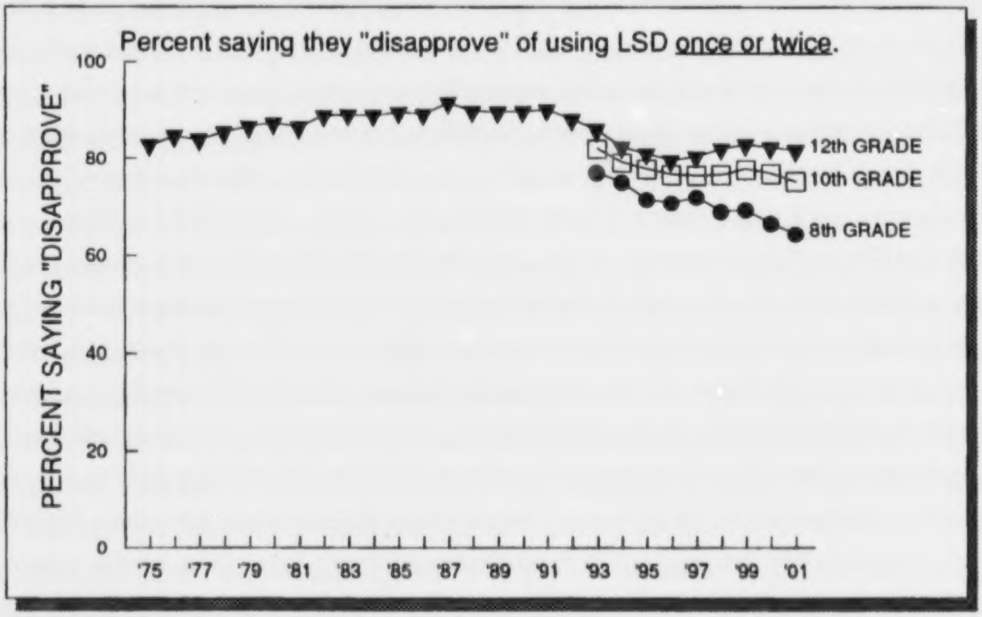
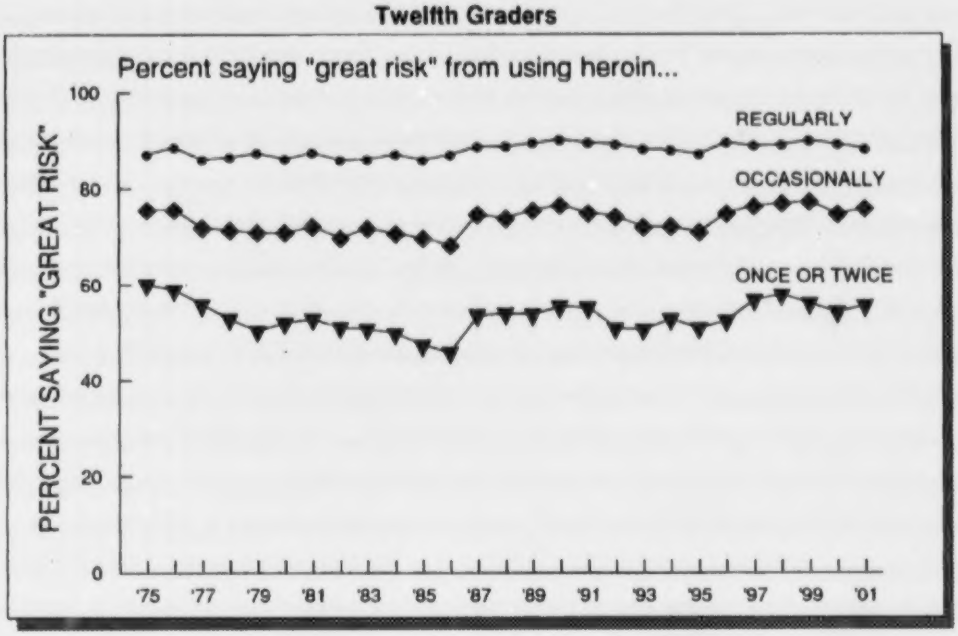


FIGURE 8-8a

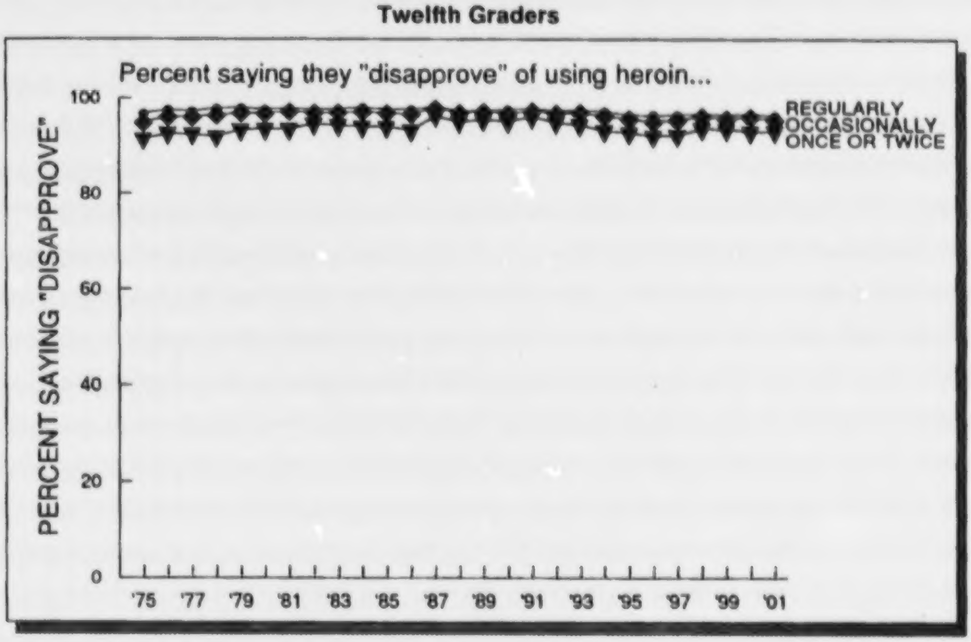
Trends in Perceived Harmfulness of Heroin Use for Twelfth Graders



NOTE: Data not available for Eighth and Tenth graders.

FIGURE 8-8b

Trends in Disapproval of Heroin Use for Twelfth Graders



NOTE: Data not available for Eighth and Tenth graders.

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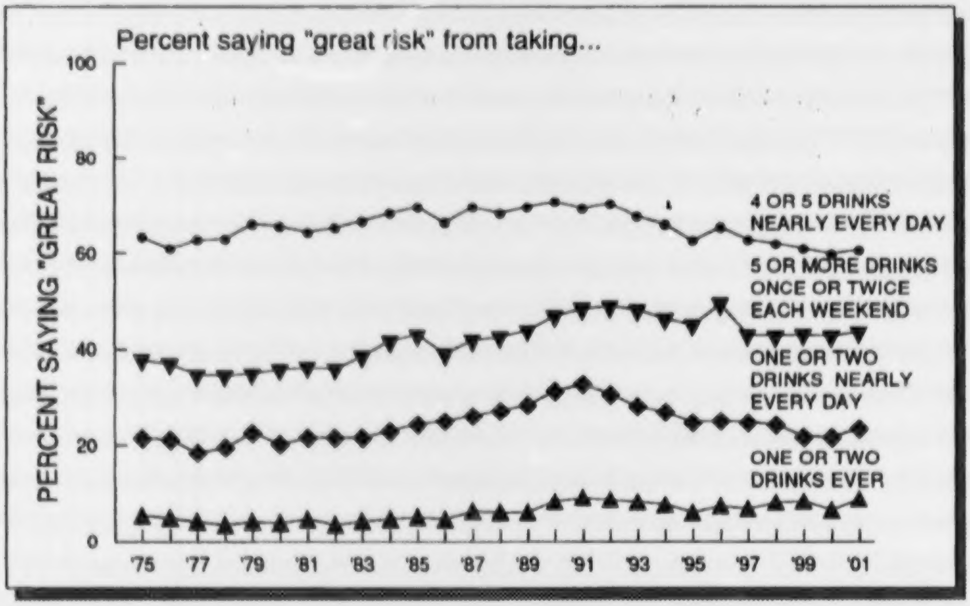
FIGURE 8-9a

Trends in Perceived Harmfulness of Alcohol Use for Eighth, Tenth and Twelfth Graders

Twelfth Graders



Eighth, Tenth and Twelfth Graders

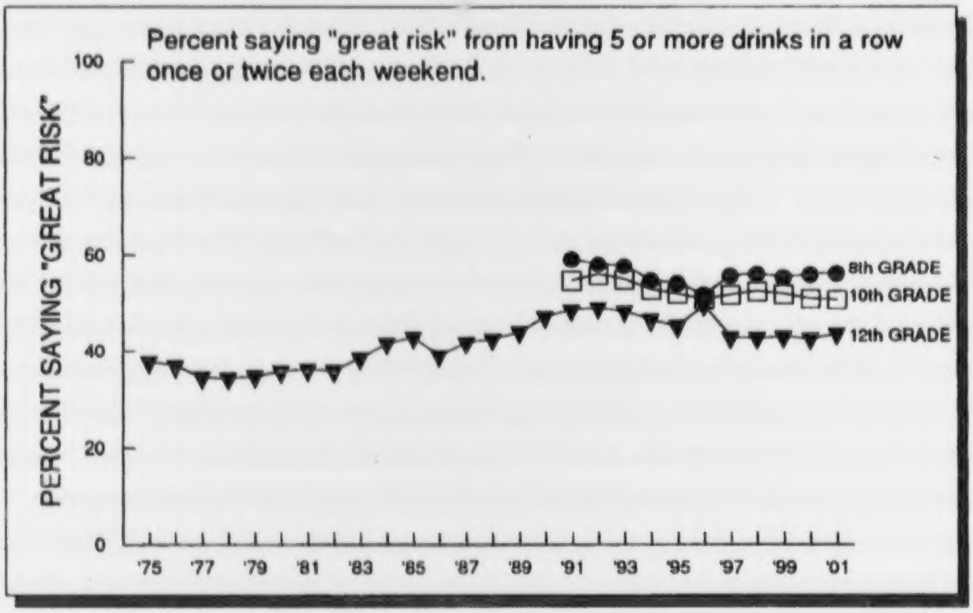
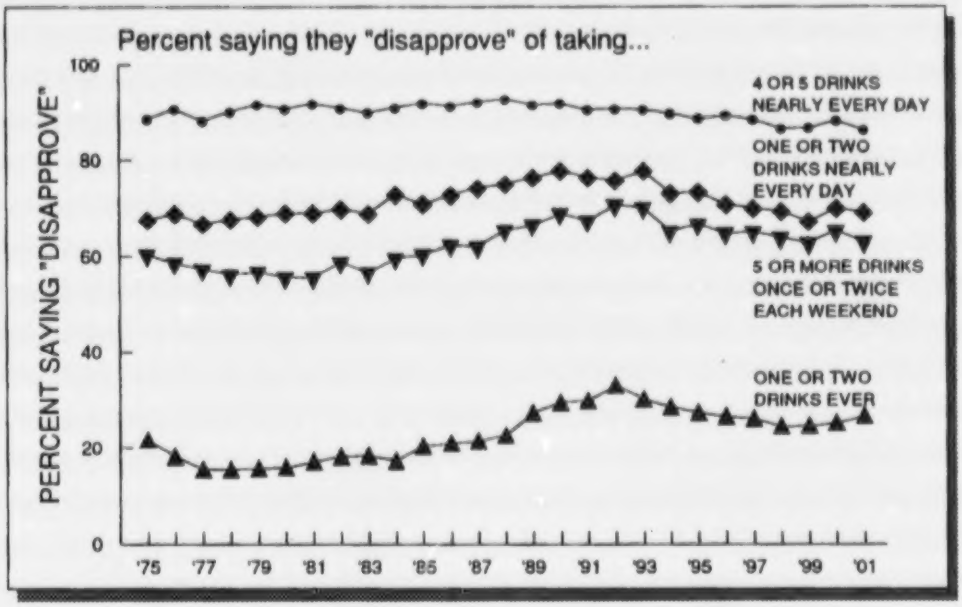


FIGURE 8-9b

Trends in Disapproval of Alcohol Use for Eighth, Tenth and Twelfth Graders

Twelfth Graders



Eighth, Tenth and Twelfth Graders

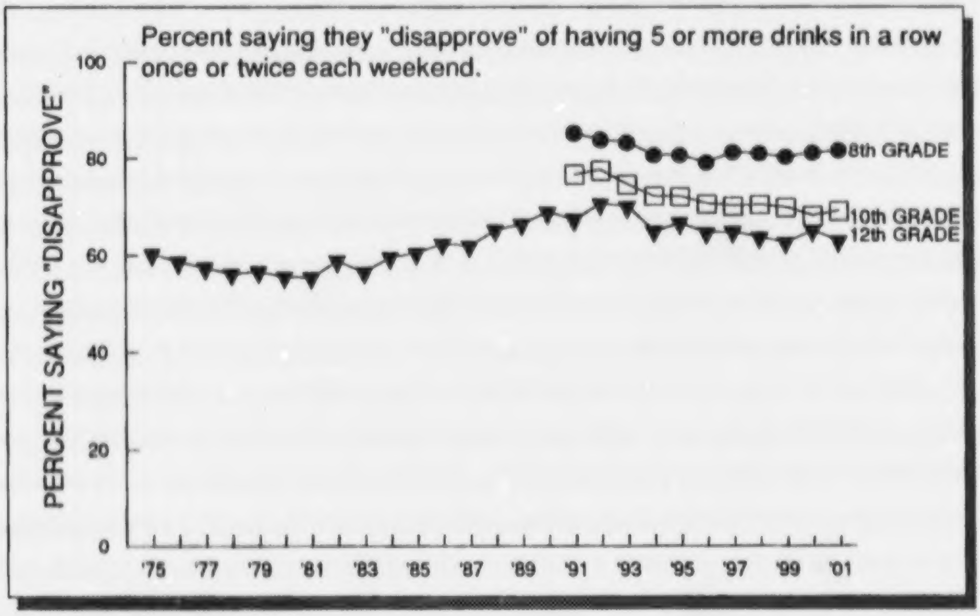


FIGURE 8-10a

Trends in Perceived Harmfulness of Smoking One or More Packs of Cigarettes per Day for Eighth, Tenth and Twelfth Graders

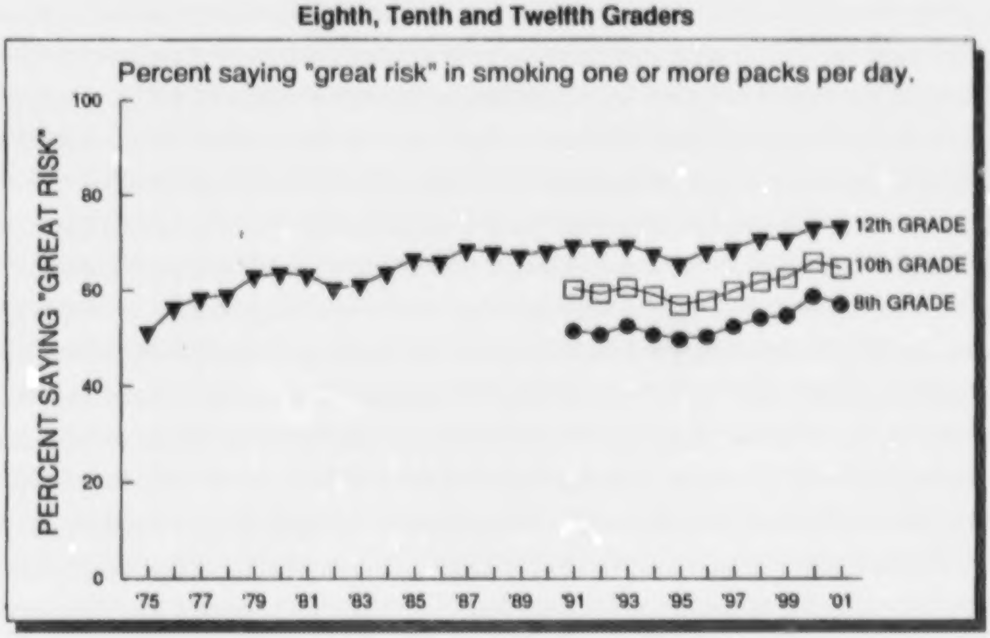


FIGURE 8-10b

Trends in Disapproval of Smoking One or More Packs of Cigarettes per Day for Eighth, Tenth and Twelfth Graders

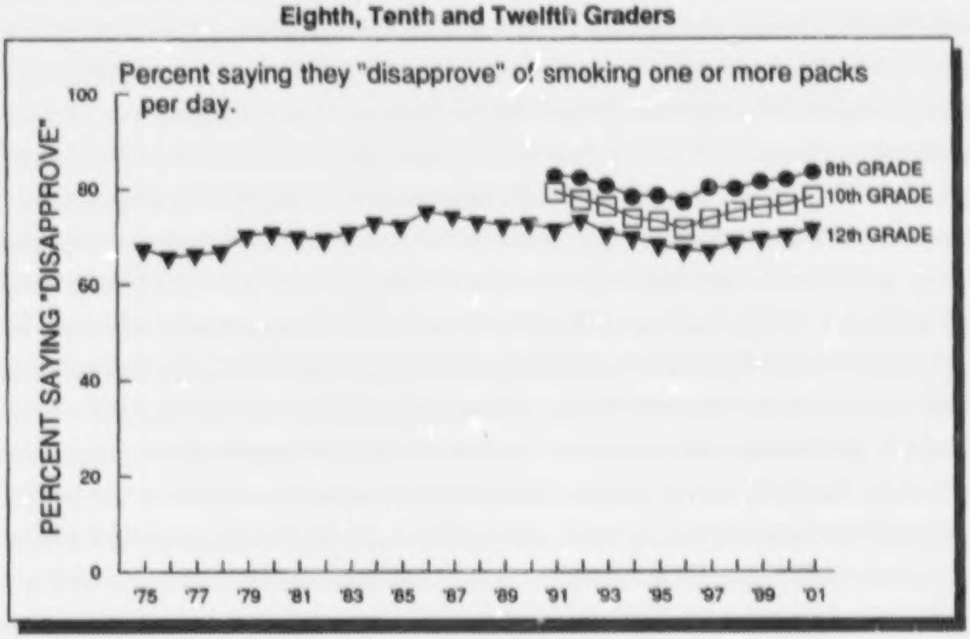


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FIGURE 8-11a

Trends in Perceived Harmfulness of Using Smokeless Tobacco Regularly for Eighth, Tenth and Twelfth Graders

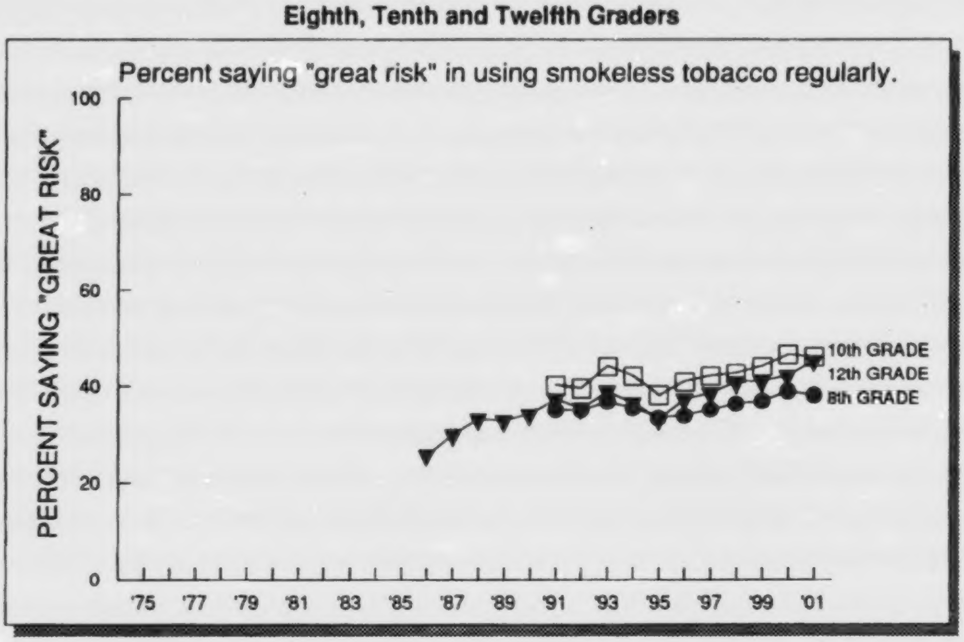
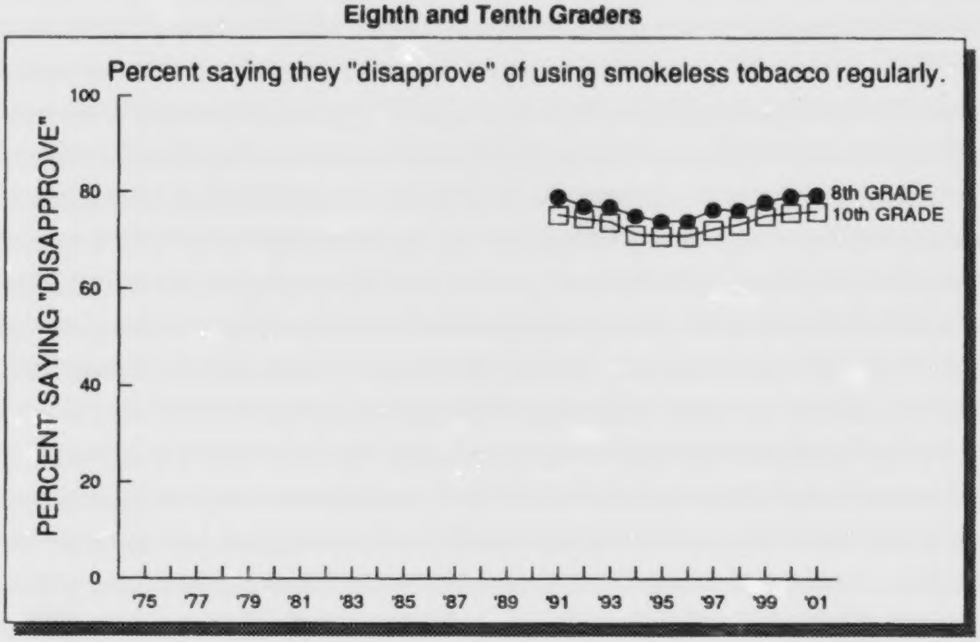


FIGURE 8-11b

Trends in Disapproval of Using Smokeless Tobacco Regularly for Eighth and Tenth Graders



NOTE: Data not available for Twelfth graders.

Chapter 9

THE SOCIAL MILIEU

In the preceding chapter we dealt with students' own attitudes about various forms of drug use. Such attitudes about drug use, as well as drug-related behaviors themselves, obviously do not occur in a social vacuum. Drugs are discussed in the media; they are a topic of considerable interest and conversation among young people; and they are also a matter of much concern to parents, concern that often is strongly communicated to their children. We know that young people are affected by the actual drug-taking behaviors and attitudes of their friends and acquaintances, as well as by the availability of the various drugs. This section presents data on several of these relevant aspects of the social milieu.

We begin with questions about parental and peer attitudes, questions that closely parallel the questions regarding respondents' own attitudes about drug use. Measures of perceived *parental* attitudes were included near the beginning of the study, in 1975-1979, but these measures were dropped because there was little variation over time in students' responses. Thus, the data about parental attitudes presented in this chapter are based on those early results.

PERCEIVED ATTITUDES OF PARENTS AND FRIENDS: TWELFTH GRADERS

Perceptions of Parental Attitudes

- Drug use appears to constitute one area in which the perceived position of parents approaches unanimity. Even at the height of the drug epidemic in 1979, a large majority of seniors reported that their parents would disapprove or strongly disapprove of their engaging in ***any of the drug use behaviors*** listed in Table 9-1. (The data for the perceived parental attitudes are not provided in tabular form, but they are displayed in Figures 9-1a, 9-1b, and 9-2.)

- In 1979, over 97% of seniors said that their parents would disapprove or strongly disapprove of their smoking ***marijuana*** regularly, even just trying ***LSD*** or ***amphetamines***, or having ***four or five drinks*** every day. (Although the questions did not ask about more frequent use of LSD or amphetamines or about any use of heroin, it is obvious that if such behaviors had been included in the list, virtually all seniors would have indicated parental disapproval.)

- Even experimental use of ***marijuana*** was seen as parentally disapproved by the great majority of the 1979 seniors (85%). Assuming that the students were generally correct about their parents' attitudes, these results clearly showed a substantial generational difference of opinion about use of the drug at that time.

- Also likely to be perceived as rating high parental disapproval (91%-93% disapproval) were ***occasional marijuana*** use, taking ***one or two drinks*** nearly every day, and ***smoking a pack or more of cigarettes daily***.

- A slightly lower proportion of seniors (85%) felt their parents would disapprove of their having ***five or more drinks once or twice every weekend***. This was the same percentage that said their parents would disapprove of simply experimenting with marijuana, showing a considerably more tolerant parental attitude toward alcohol than marijuana use.

Perceptions of Friends' Attitudes

- Since the beginning of the study, a parallel set of questions has asked respondents to estimate their friends' attitudes about drug use (see Table 9-1). These questions ask, "*How do you think your close friends feel (or would feel) about you* [taking the specified drug at the specified level]?" In 2001, peer disapproval for experimenting with a drug was highest for trying ***crack*** and ***cocaine powder*** (both at 92%), ***cocaine*** (89%), ***LSD*** (86%), and ***amphetamines*** (84%). Presumably, if ***heroin*** or ***PCP*** were on the list, they, too, would receive very high peer disapproval.

- Even experimenting with ***marijuana*** would be viewed with disapproval by friends, according to most seniors (58%); and a large majority think their friends would disapprove if they smoked marijuana regularly (78%).

- Three-quarters of all seniors think they would face peer disapproval if they smoked a ***pack or more of cigarettes daily*** (75%).

- While ***heavy drinking on weekends*** was judged by more than half (58%) to be disapproved by their friends (many of whom exhibit that behavior themselves), substantially more (73%) think consumption of ***one or two drinks nearly every day*** would be disapproved, and the great majority (84%) would face the disapproval of their friends if they drank ***four or five drinks nearly every day***.

- In sum, peer norms among twelfth-grade students differ considerably for the various drugs and for varying degrees of involvement with those drugs, but overall they tend to be quite conservative. The great majority of seniors have friendship circles that do not condone the use of illicit drugs other than marijuana, and over half (58%) of them believe their friends would disapprove of their even trying marijuana.

- Although we did not have the space to include these questions in the eighth- and tenth-grade questionnaires, there seems little doubt that these students would have reported at least as restrictive peer norms as the twelfth graders, and quite likely more restrictive ones, based on the cross-grade comparisons in levels of personal disapproval discussed in Chapter 8.

A Comparison of the Attitudes of Parents, Peers, and Twelfth Graders

A comparison of seniors' perceptions of friends' disapproval with seniors' perceptions of parents' disapproval in the earlier years for which comparison are available (1975-1979) showed several interesting findings.

- First, there was rather little variability from year to year in students' perceptions of their parents' attitudes. Nearly *all* high school seniors said their parents would disapprove of any of the drug behaviors listed. Nor was there much variability among the different drugs in perceived parental attitudes. However, *peer* norms varied much more from drug to drug and across time. From these facts, we may conclude that peer norms have a much greater chance of explaining variability in the respondents' own individual attitudes or use than parental norms, simply because peer norms vary more. We wish to emphasize that this is quite different than saying that parental attitudes do not matter, or even that they matter less than peer attitudes.

- Despite less variability in parental attitudes, the *ordering* for disapproval of drug use behaviors was much the same as for peers. That is, among the illicit drugs asked about, the highest frequencies of perceived disapproval were for trying cocaine, while the lowest frequencies were for trying marijuana.

- A comparison with the seniors' own attitudes regarding drug use reveals that, on average, they are much more in accord with their peers than with their parents (see Figures 9-1a, 9-1b, and 9-2). The differences between seniors' own disapproval ratings in 1979 and those attributed to their parents tended to be large, with parents seen as more conservative overall in relation to ***every drug***, licit or illicit. The largest difference occurred in the case of ***marijuana*** experimentation, of which only 34% of seniors in 1979 said they disapproved, versus 85% who said their parents would disapprove. Although seniors' own disapproval rate of experimenting with marijuana has risen considerably (it was 49% in 2001), it is likely that the greatest disparity would still remain between students' own attitudes and those of their parents (versus their peers) on the issue of such marijuana use.

Trends in Perceptions of Parents' and Friends' Attitudes

A number of important changes in twelfth graders' perceptions of their peers' attitudes have taken place. These shifts are presented graphically in Figures 9-1a, 9-1b, and 9-2. Adjusted trend lines have been used for data collected before 1980. We discovered that the deletion in 1980 of the parental attitude questions, which were located immediately preceding the questions about friends' attitudes, removed what we judged to be an artifactual depression of the ratings of friends' attitudes, a phenomenon known as a question-context effect. This effect was particularly evident in the trend lines dealing with friends' disapproval of alcohol use, where otherwise smooth trend lines showed abrupt upward shifts in 1980. It appears that when questions about parents' attitudes were present, respondents tended to understate peer disapproval in order to emphasize the *difference* between their parents' attitudes and their peers' attitudes. In the adjusted lines, we have attempted to correct for that artifactual depression in the 1975, 1977, and 1979 scores.[66] We think the adjusted trend lines give a more accurate picture of the change that took place then. Note that the question-context effect seems to have had more influence on the questions dealing with cigarettes and alcohol than on those dealing with illicit drugs. Aside from this change attributable to question context, a number of real and important changes have occurred in friends' disapproval.

- For each level of ***marijuana*** use—trying once or twice, occasional use, and regular use—there was a *drop* in perceived disapproval of both parents and friends in the late 1970s. We know from our other findings that these perceptions of peers' norms correctly reflected actual shifts in the individual attitudes of their peers—that is, disapproval of marijuana use was, in fact, decreasing among seniors (see Figures 9-1a and 9-3). There is little reason to suppose such perceptions were less accurate in reflecting shifts in parents' attitudes. Therefore, we conclude that the social norms regarding marijuana use among adolescents and adults had been relaxing before 1979. However, consistent with the seniors' reports about their own attitudes, there then was a sharp reversal in peer norms; and peer disapproval of marijuana use increased for more than a decade, through 1992. In 1993 another sharp reversal occurred, with the percentage of seniors saying that their friends would disapprove dropping from 3 to 7 percentage points, depending on the level of use (i.e., once or twice, occasionally, or regularly). Perceived peer disapproval dropped another 9 to 14 percentage points by 1997, before beginning to turn upward again in 1998 and in the years since.

- From 1975 through 1980, relatively little change occurred in either self-reported attitudes or perceived peer attitudes toward trying ***amphetamines*** once or twice (see Figure 9-1b); then, in 1981 both measures showed significant and parallel dips in disapproval, and at the same time use rose sharply. From 1981 to 1992, disapproval rose fairly steadily as use declined. Between 1992 and 1996, both friends' disapproval and personal disapproval of experimental use decreased significantly as use increased slightly. Friends' disapproval leveled in 1997 at 80% and by 2001 was up slightly to 84%.

- Peer disapproval of ***LSD*** use, which had been high and relatively stable for some years, decreased steadily between 1988 and 1997 as use increased significantly (see Figure 9-1b). In 1998 peer disapproval began to increase and continued to increase into 2001.

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[66] The correction evolved as follows: we assumed that a more accurate estimate of the true change between 1979 and 1980 could be obtained by taking an average of the changes observed in the year prior and the year subsequent, rather than by taking the observed change (which we knew to contain the effect of a change in question context). We thus calculated an *adjusted* 1979-1980 change score by taking an average of one-half the 1977-1979 change score (our best estimate of the 1978-1979 change) plus the 1980-1981 change score. This estimated change score was then subtracted from the observed change score for 1979-1980, the difference being our estimate of the amount by which peer disapproval of the behavior in question was being understated because of the context in which the questions occurred prior to 1980. The 1975, 1977, and 1979 observations were then adjusted upward by the amount of that correction factor.

- While perceived attitudes of friends were not asked about ***barbiturate*** use, it seems likely that such perceptions moved in parallel to the seniors' own attitudes, since such parallel movement has been observed for the use of virtually all other drugs (see Figures 9-1a and 9-1b).

- Seniors' *own* disapproval of experimental ***cocaine*** use dropped between 1976 and 1979 as use increased, and then it rose very gradually through 1991. Questions on friends' attitudes about cocaine use were added to the study in 1986. Between 1986 and 1992, a sharp increase in peer disapproval of experimental or occasional cocaine use was observed, with the proportion saying that their close friends would disapprove of their experimenting with cocaine rising from 80% in 1986 to 92% in 1992. This corresponds to the period in which an even larger increase in perceived risk occurred, and we hypothesize that the change in the perceived dangers of using cocaine contributed to changes in the acceptability of using that drug.[67] From 1993 through 1995, perceived friends' disapproval stabilized, followed by some decrease in 1996 and 1997. Friends' disapproval increased in recent years and by 2000 was higher than in 1997. However, some decreases occurred in 2001.

- With regard to ***regular cigarette smoking***, the proportion of seniors saying that their friends would disapprove of them smoking a pack or more daily rose from 64% (adjusted) in 1975 to 74% in 1980 (see Figure 9-2). Use declined from 1977 to 1981. Through the next 12 years, perceived peer disapproval fluctuated by only a few percentage points and then dropped significantly between 1992 and 1995, from 76% to 69%. Use rose from 1992 to 1997. Reported peer disapproval flattened from 1995 to 1998, but has since increased by six percentage points to 75% in 2001. (Use has been declining since 1998.)

- For alcohol, the perceived peer norms for ***weekend binge drinking*** generally moved in parallel with seniors' statements about their own personal disapproval. A slight decline in friends' disapproval occurred from the mid-1970s until the early 1980s, followed by a period of gradual increase between 1983 and 1992. (See Figure 9-2.) Some divergence occurred when seniors reported their own attitudes becoming less tolerant while perceived peer norms changed more slowly, suggesting some "collective ignorance" of the extent to which peers disapproved of this activity. Both measures declined some between 1992 and 1998. The proportion saying their close friends would disapprove dropped some, from 61% to 56%, before rebounding to 58% in 1999, where it remained in 2000 and 2001.

- ***Heavy daily drinking*** is seen by the great majority of seniors (84% in 2001) as disapproved by their peers. Little systematic change occurred for almost two decades (from 1975 to 1993), followed by a slight decline between 1993 and

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[67] Johnston, L. D. (1991). Toward a theory of drug epidemics. In R. L. Donohew, H. Sypher, & W. Bukoski (Eds.), *Persuasive communication and drug abuse prevention* (pp. 93-132). Hillsdale, NJ: Lawrence Erlbaum.

1997, to 83%; it was at 84% in 2001. Taking ***one or two drinks nearly every day*** saw some growth in peer disapproval between 1981 and 1990 (from 70% to 79%), but it has fallen back some in the years since then (to 73% in 2001).

FRIENDS' USE OF DRUGS

It is generally acknowledged that much youthful drug use is initiated through a peer social-learning process, and research has shown a high correlation between an individual's illicit drug use and that of his or her friends. Such a correlation can, and probably does, reflect several causal patterns: (a) a person with friends who use a drug will be more likely to try the drug; (b) conversely, the individual who is already using a drug will be more likely to introduce friends to the experience; and (c) users are more likely to establish friendships with other people who use.

Given the potential importance of exposure to drug use by others, we thought it useful to monitor students' association with others taking drugs, as well as their perceptions about the extent to which their friends use drugs. Two sets of questions, each in a different questionnaire form and each covering all or nearly all of the categories of drug use treated in this report, ask seniors to indicate for each drug (a) how often during the past 12 months they were around people taking it to get high or for "kicks" and (b) what proportion of their own friends use it. (The data dealing with direct exposure to people using may be found in Table 9-2. The questions dealing with friends' using are shown in Table 9-4.) As would be expected, respondents' answers to these two questions are highly correlated with the respondents' own drug use; thus, for example, seniors who have recently used marijuana are much more likely to report that they have been around others getting high on marijuana and that most of their friends use it. The questions on proportions of friends using the various drugs were included in the questionnaires used for eighth and tenth graders, and the results for those age groups will be discussed in a separate section.

Exposure to Drug Use by Friends and Others: Twelfth Graders

- A comparison of the aggregated responses about friends' use and about being around people in the last 12 months who were using various drugs to get high reveals a high degree of correspondence between these two indicators of exposure, even though these two questions appear in separate forms of the questionnaire. For each drug, the proportion of respondents saying "none" of their friends use it is fairly close to the proportion who say that during the last 12 months they have not been around anyone who was using that drug to get high. Similarly, the proportion reporting that "most" or "all" of their friends use a given drug is roughly the same as the proportion saying they have "often" been around people getting high on that drug.

- As would be expected, reports of exposure and friends' use closely parallel the figures on seniors' own use (compare Figures 4-1 and 9-4). It is no surprise that the highest levels of exposure involved ***alcohol***; more than one-half (53%) said they have "often" been around people using it to get high. What may come as a surprise is that 33% of all seniors said that most or all of their friends ***get drunk*** at least once a week. (This *is* consistent, however, with the fact that 30% said they personally had taken five or more drinks in a row at least once during the prior two weeks.)

- After alcohol, students are exposed next most frequently to ***marijuana***. Three-quarters of the twelfth graders (75%) reported having been around people using marijuana during the prior year. Some 31% said they have "often" been around people using it to get high, and another 23% said they have been exposed "occasionally." Nearly a quarter (24%) said that most or all of their friends smoke marijuana.

- ***Amphetamines*** rank next in exposure: 32% of seniors reported some exposure to use in the prior year, and 33% said they have friends who use them.

- Among all seniors, 25% have been around someone using ***cocaine*** to get high over the past year, and more than one-quarter (27%) said they have friends who use it.

- For the remaining illicit drugs, any exposure to use in the past year ranges from 28% for ***hallucinogens other than LSD*** down to 9% for ***heroin***.

- Half of the seniors (50%) reported no exposure to ***any of the illicit drugs other than marijuana*** during the prior year, and more than one-fifth (24%) reported no exposure to ***any illicit drug*** (including marijuana) during the prior year. Thus, exposure to ***marijuana*** use, at least, is still widespread (at 75%), but exposure to the use of ***drugs other than marijuana*** occurred for half (50%).

- A quarter of seniors (25%) reported that most or all of their friends smoke ***cigarettes***, but the great majority (87%) have at least *some* friends who smoke.

Friends' Use of Drugs: Eighth and Tenth Graders

While the questions about exposure to use were not included in the questionnaires for eighth and tenth graders, the questions regarding the proportion of their friends who use each drug were.

- As would be expected, for almost all of the various drugs, eighth- and tenth-grade students are considerably less likely to have friends who use than are twelfth graders (see Table 9-3). For example, for ***marijuana***, less than half (46%) of the eighth graders and more than two-thirds (73%) of the tenth graders said they have friends who use it, compared to the 81% of twelfth graders who do.

- In contrast, among eighth graders, 29% said they have some friends who use ***inhalants*** versus 21% of the tenth graders and 22% of the twelfth graders. This is consistent with the fact that inhalant use is most prevalent at eighth grade.

- Exposure to ***alcohol*** use through friends is widespread. Almost three-quarters (72%) of the eighth graders and 91% of the tenth graders reported having friends who use alcohol. In fact, nearly one-fourth (23%) of the eighth graders and one-half (50%) of the tenth graders said that most or all of their friends drink, and the proportions saying that most or all of their friends ***get drunk*** at least once a week is one in eleven (9%) in eighth grade and one in five (22%) in tenth grade.

- Exposure to ***cigarette smoking*** by friends is also very high for these young people, with two-thirds (64%) of the eighth graders and 83% of the tenth graders saying they have at least some friends who smoke.

- More than a quarter of the eighth graders (27%) and 46% of the tenth graders have friends who use ***smokeless tobacco***.

- In sum, American adolescents have a high degree of exposure to illicit drug use among their peers, whether or not they use illicit drugs themselves. They also have very high exposure to smoking, drinking, and drunkenness among their peers.

TRENDS IN EXPOSURE TO DRUG USE AND FRIENDS' USE OF DRUGS

Trends in Exposure to Drug Use by Friends and Others: Twelfth Graders

- Between 1976 and 1978, seniors' reports of exposure to ***marijuana*** use increased in about the same proportion as did actual self-reported monthly use. Both exposure to use and actual use stabilized in 1979, and then both dropped steadily so that the proportion saying they were "often" around people using marijuana decreased by more than half between 1979 and 1992 (from 39% to 16%). After 1992, however, there were significant *increases* in such exposure, reaching 33% in 1997, paralleling the significant rise in self-reported use. Then in 1998, both measures began to drop a bit, and both measures have leveled since then.

- The proportion of seniors exposed to ***cocaine*** users showed a consistent increase from 1976 to 1979, as self-reported use also rose. Between 1979 and 1984, there was little change in exposure to use, coinciding with a period of stability in self-reported use. Then, in 1985 and 1986 there was an increase in reported exposure to use; and these were the peak years in self-reported use. From 1986 through 1993, seniors' exposure to cocaine use dropped appreciably, with the proportion saying they had any friends who used cocaine falling from 46% in 1986 to 25% in 1993 (see Table 9-4). Self-reported use fell by two-thirds during this interval. Then self-reported cocaine use nearly doubled between 1992 and 1999, and the proportion reporting most or all of their friends use cocaine also nearly doubled (from 1.5% to 2.9%). Both have decreased since 1999.

- The proportion having any friends who used ***amphetamines*** rose from 41% to 51% between 1979 and 1982, paralleling a sharp increase in self-reported use over that period. The proportion saying they were around people using amphetamines "to get high or for kicks" also jumped substantially between 1980 and 1982 (by 9 percentage points).[68] It then fell continually, a full 26 percentage points, between 1982 and 1992 (to 25%) as self-reported use declined quite substantially. From 1992 to 1997, both self-reported use and exposure to use increased, and both have leveled since then.

- Although we did not ask students about their own use of ***MDMA*** (***ecstasy***) until 1996, we did ask about friends' use beginning in 1990. This measure stayed fairly stable at 11% to 13% between 1990, when it was first measured, and 1993. There was a substantial increase between 1993 and 1997 in the proportion of seniors reporting having at least some friends who were using ecstasy (from 13% to 28%); in 1998, there was a slight decline (to 25%). In 1999 there was a small increase (to 27%) in the proportion reporting that they had friends who used ecstasy (not as big a change as might have been expected from the sharp increase in self-reported ecstasy use that year). But in 2000, reported use by friends jumped dramatically, to 37%, coincident with a sharp further increase in self-reported use. There was another significant increase in friends' use in 2001 (to 42%), while self-reported annual use also increased, though not significantly.

- For all of the other illicit drugs (including ***inhalants***, ***nitrite inhalants***, ***LSD***, ***other hallucinogens***, ***tranquilizers***, ***barbiturates***, ***PCP***, and ***methaqualone***) the trends in exposure and/or trends in friends' use have generally closely paralleled the trends in self-reported use.

- The proportion saying that most or all of their friends smoke ***cigarettes*** dropped steadily and substantially between 1976 and 1981, from 37% to 22%. During this period self-reported use dropped markedly, and more seniors perceived their friends as disapproving of regular smoking. Between 1982 and 1992, both friends' use and self-reported use remained relatively stable; in fact, in 1992 the friends' use rate was close to the 1981 rate (21% and 22%, respectively). After 1992 there was a significant increase in the proportion who said most or all of their friends smoke cigarettes, up to 34% by 1997, and self-reported smoking also increased significantly during this same period. However, 1998 was a turnaround year for the twelfth graders: smoking rates started to drop, as did reported friends' use.

- The proportion saying most or all of their friends ***get drunk*** at least once a week increased between 1976 and 1979, from 27% to 32%; during the same period the prevalence of self-reported, ***occasional heavy drinking*** rose by about the same amount. There was little change in either measure for about five years. After 1983, self-reports by seniors of their own heavy drinking began to decline, but reported heavy drinking by friends showed a later, more modest decline. Self-reported heavy drinking fell from 41% to 28% between 1983 and 1993, while reports of friends getting drunk at least once a week fell only from 31% to 28%. Both measures then rose slightly for a few years but have been fairly stable since 1997.

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[68] This finding was important, since it indicated that a substantial part of the increase observed in self-reported amphetamine use was due to influences other than simply an increase in the use of over-the-counter diet pills or stay-awake pills, which presumably are not used to get high. Obviously, more young people were using stimulants for recreational purposes. Of course, the question still remains of whether the active ingredients in those stimulants really were amphetamines.

The most impressive fact here is that about one-third of all high school seniors (33% in 2001) said that most or all of their friends get drunk at least once a week; this is almost the same proportion that said they personally have been binge drinking in the past two weeks (30%). One in five (20%) said that *none* of their friends get drunk that often.

Implications for Validity of Self-Reported Usage Questions

We have noted a high degree of correspondence in the aggregate-level data presented in this report among seniors' self-reports of their *own* drug use, their reports concerning *friends'* use, and their own *exposure* to such use. Drug-to-drug comparisons in any given year across these three types of measures tend to be highly parallel, as are the changes from year to year.[69] We take this consistency as additional evidence of the validity of the self-report data (and of trends in the self-report data), since there should be less reason to distort answers on use by unidentified friends (or general exposure to use) than to distort reporting one's own use. Figure 9-3 illustrates the degree of cross-time correspondence between the proportion of seniors saying they personally used marijuana in the 30 days prior to the survey and those saying most or all of their friends use marijuana.

Trends in Friends' Use: Eighth and Tenth Graders

Trend data for grades 8 and 10 on friends' use have been available since 1991 (see Table 9-3). In general, they also show trends that are highly consistent with the trends in self-reported use at those grade levels. These questions are included in all eighth- and tenth-grade questionnnaire forms, providing large sample sizes.

- In 1992, eighth graders showed an increase in self-reported use of a number of drugs (including ***marijuana***, ***inhalants***, ***cocaine powder***, and ***crack***) as well as increases in the proportions of their friends using them. In 1993, these trends continued among eighth graders, who were then joined by tenth and twelfth graders. In 1997, the eighth graders began to show a decline in their use of a number of drugs (including ***marijuana***, ***inhalants***, and ***heroin***), and decreases in the proportions of their friends reported using them began a year later. Twelfth graders again followed suit for some of the drugs.

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[69] Those minor instances of noncorrespondence may well result from the larger sampling errors in our estimates of these environmental variables, which are measured on a sample size one-fifth or one-sixth the size of the self-reported usage measures. They may also result, of course, from a lag between a change in the reality and students' realization of that change.

- For ***marijuana***, self-reported use increased very sharply in all grades between 1992 and 1996, a fact also reflected in reported use by friends. The proportions saying that some of their friends smoke marijuana rose by 10 percentage points among eighth graders and by 11 percentage points among tenth graders in 1994 alone (see Table 9-3). Between 1994 and 1996, reported friends' use in both grades rose an additional 10 percentage points. For eighth graders, friends' use declined between 1996 and 2000, as did self-reported use. Tenth graders also showed a decline in friends' use between 1996 and 1998, as self-reported use leveled and then declined until 1999. In 2001, for eighth and tenth graders, friends' use increased very slightly, while self-report use was level.

- In all three grades, the proportions saying that they have friends who use ***inhalants*** rose consistently from 1991 through 1996. Self-reported usage rates also rose from 1991 to 1995. In 1996, use of inhalants leveled or reversed in all three grades, as did reported friends' use in 1997. For eighth and tenth graders, use has continued to decrease as friends' use decreased some through 2000 and then leveled. Twelfth graders' own use has been falling since 1995, and they reported fewer friends using inhalants through 1999, followed by a leveling.

- For ***alcohol***, self-reported use and friends' use have also moved in fairly parallel ways since 1992. Self-reported drinking in the past 30 days was fairly stable among both eighth and tenth graders between 1992 and 1996, as was the proportion that said they have at least some friends who drink alcohol. Since then, both measures have declined among eighth graders, while both have been level among tenth and twelfth graders. Self-reported ***drunkenness*** increased slightly in both grades between 1992 and 1996, as did the proportion saying they have some friends who get drunk weekly. Here, too, both measures have declined some among eighth graders, while there is very little difference between 1997 and 2001 among tenth and twelfth graders.

- The data from eighth and tenth graders show a steadily increasing proportion of friends smoking ***cigarettes*** between 1991 and 1996. Self-reported smoking rates rose considerably during the same period. In 1997, both measures showed a slight reversal in both grades—a reversal that has continued into 2000. In 2001 both measures decreased in both grades.

PERCEIVED AVAILABILITY OF DRUGS

One set of questions asks respondents how difficult they think it would be to obtain each of a number of different drugs if they wanted it. The answers range across five categories from "probably impossible" to "very easy."[70] We use the term "perceived availability" in discussing the responses to these questions. We recognize that availability is multidimensional, and respondents may take into consideration a variety of factors, including knowing where to get access, the difficulty of getting to an access place and, for some respondents, even possibly the monetary cost. We suspect that for most respondents, the monetary price will not be considered, and thus our measure is likely to be somewhat less general than a concept of availability that includes price.

While no systematic effort has been undertaken to assess directly the validity of these measures, it must be said that they do have a rather high level of face validity, particularly if it is the subjective reality of "perceived availability" that is purported to be measured. It also seems quite reasonable to us to assume that, to some extent, perceived availability tracks actual availability.

Perceived Availability

- There are substantial differences in the perceived availability of the various drugs. In general, the more widely used drugs are reported to be available by higher proportions of the age group, as would be expected (see Tables 9-5 and 9-6). Also as would be expected, drugs are generally perceived to be more available by older age groups. Both associations are consistent with the notion that availability is largely attained through friendship circles. The higher the proportion of a friendship circle that uses a drug, the greater the proportion of students who have access to it.

- Because many ***inhalants***—such as glues, butane, and aerosols—are universally available, we do not include a question about their availability.

- In addition, the availability of ***cigarettes*** is not asked of twelfth graders because we have assumed that they are almost universally available as well. However, eighth and tenth graders are asked about the availability of ***cigarettes***, and even at these grade levels it is seen as extremely high. Some 68% of eighth graders and 86% of tenth graders thought that cigarettes would be "fairly easy" or "very easy" for them to get, if they wanted some.

- The great majority of these teens also see ***alcohol*** as readily available: 71% of the eighth graders, 88% of the tenth graders, and 94% of the twelfth graders said they could get it fairly easily or very easily.

- In contrast, far fewer younger students see that illicit drugs are as accessible. Even so, ***marijuana*** was described as "fairly easy" or "very easy" to get by almost half (48%) of the eighth graders, followed by ***amphetamines*** (26%), ***crack*** and ***cocaine powder*** (both 24%), ***steroids*** (23%), ***barbiturates*** (21%), ***LSD*** (18%), and ***heroin*** (17%).

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[70] In the questionnaires used for eighth and tenth graders, an additional answer category of "can't say, drug unfamiliar" is offered; respondents who chose this answer are included in the calculation of percentages. Generally, fewer than 20% of the respondents selected this answer.

- When we compare eighth, tenth, and twelfth graders, we find that perceived availability rises sharply with grade level. For example, in 2001, 48% of eighth graders said ***marijuana*** would be "fairly easy" or "very easy" to get, versus 77% of tenth graders and 89% of twelfth graders. In fact, for the other drugs included in the questions, the proportion of students saying they are available to them is about twice as high among twelfth graders as among eighth graders. These differences are probably attributable to the overall differences in prevalence of use rates across these grade levels. Children in lower grades are considerably less likely to have friends who use these drugs and, thus, are less likely to have access through those friends. The differences between age groups may also reflect less willingness and/or less motivation on the part of those who deal drugs to establish contact with younger children.

- ***Marijuana*** appears to be available to almost all high school seniors; some 89% reported that they think it would be "very easy" or "fairly easy" for them to get it—almost twice the number who reported ever having used it (49%).

- After marijuana, twelfth-grade students indicated that ***ecstasy*** is among the easiest drug to obtain (62%).

- ***Amphetamines*** are also one of the most available drugs at 57%.

- Between 40% and 50% of the seniors perceived ***cocaine*** (46%), ***hallucinogens other than LSD*** (49%), ***LSD*** (45%), ***steroids*** (44%), and ***cocaine powder*** and ***narcotics other than heroin*** (41%) as readily available.

- ***Barbiturates***, ***tranquilizers***, ***heroin***, ***PCP***, and ***crystal methamphetamine*** (***ice***), were reported as available by substantial minorities of seniors (36%, 33%, 32%, 27%, and 28%, respectively). See Table 9-6 for the full list of drugs included in the questions for twelfth graders; a few of these were not asked of the younger students.

- Even drugs with lower usage rates, such as the ***nitrite inhalants***, are seen as available by a fifth of the seniors (23%).

- Previously, we have found that two-thirds or more of the twelfth graders who had actually used any of the illicit drugs in the past year felt that drugs would be easy for them to get.

Trends in Perceived Availability for Twelfth Graders

Trend data on availability for seniors are presented in Table 9-6 and Figures 9-5a through 9-5c. A glance at those three figures will show that there have been some substantial fluctuations in the perceived availability of most drugs over the 27 years covered by the study.

- ***Marijuana*** has been the most consistently available illicit drug, but even it showed some small variations over the years. For the first time since the study began in 1975, marijuana showed a small but statistically significant decline in perceived availability between 1982 and 1984 (down 4 percentage points to 85%), undoubtedly due to the reduced proportion of seniors who had friends using it. There was no further change for the next four years, followed by a slight decline between 1988 and 1992. Between 1992 and 1998 there was a fair increase in availability (to 90%), corresponding to a sharp increase in the proportion of friends using it. Since 1999 availability has been steady at 89%. What is most noteworthy, however, is how little change there has been over the years in perceived availability, as measured by how many seniors say that marijuana is "fairly" or "very" easy to get. By this measure, marijuana has been almost universally available to American high school seniors (from 83% to 90%) over at least the past 26 years.

- The perceived availability of ***amphetamines*** jumped 13 percentage points between 1977 and 1982 (to 71%), but it then dropped gradually by 14 percentage points between 1982 and 1991 (to 57%). Then, between 1991 and 1995, perceived availability increased steadily, reaching 63% in 1995, followed by a significant decrease to 59% in 1996, after which it began to drift up a bit before falling some in 1999. Perceived availability of amphetamines has been fairly level, at 57% in 2000 and 2001.

- The perceived availability of ***barbiturates*** (see Figure 9-5b) fell from 1975 to 1980 by 11 percentage points but then jumped 6 percentage points from 1980 to 1981, when "look-alikes" were common. From 1982 to 1991 a long gradual decline of 13 points occurred, parallel to a long-term drop in the number of barbiturate users. Perceived availability rose slightly, along with use, in the early 1990s; but it has been falling back again since 1993, even though use continued to increase slightly through 2000.

- Between 1977 and 1980—a period of increased overall ***cocaine*** use—there was a substantial increase (15 percentage points) in the perceived availability of cocaine (see Table 9-6 and Figure 9-5a). Perceived availability then leveled and even dropped some in 1983, before rising sharply and steadily through 1989. After 1986, reported availability continued to rise as actual use of cocaine dropped sharply until 1993. Because there was an increase, and not a drop, in perceived availability between 1986 and 1989, we are inclined to discount reduction in supply as an explanation for the significant and important decline in use observed during that period.

- Between 1989 and 1994, there was a significant decrease of 12 percentage points in perceived availability—perhaps reflecting the impact of the greatly reduced proportion of seniors who had friends using cocaine. (The percentage reporting having friends who use it dropped by 11 points during that interval.) From 1994 to 1998, the perceived availability of ***cocaine*** increased slightly, as did its use among seniors. While use continued to rise in 1999, reported availability showed a significant decline; both use and availability declined in 2000 and 2001. Use continued to decline in 2001 as availability declined some.

- We have asked students about the perceived availability of ***crack*** only since 1987; it has fluctuated between 40% and 47%, with no clear trend (see Figure 9-5a).

- The use of ***tranquilizers*** declined fairly steadily over the 15-year interval between 1977 and 1992, and perceived availability also declined fairly steadily and quite substantially during that interval. In fact, the proportion of seniors who thought they could get tranquilizers "fairly easily" has fallen by more than half—from 72% in 1975 to 33% in 2001. Tranquilizer *use* among twelfth graders had been slowly rising through most of the 1990s and continued to do so through 2001. This is another example where availability (which was declining) could not explain the trends in use (which were rising).

- The perceived availability of ***LSD*** fell sharply in the first several years covered by the study (1975-1978), perhaps reflecting the end of a longer-term steep decline (see Figure 9-5c). Perceived availability then leveled for awhile, before dropping further in the first half of the 1980s. Between 1986 and 1995, there followed a substantial increase in the perceived availability of LSD, which rose from 29% to 54% (the highest level it reached in over two decades). Since 1995, there has been some falloff in perceived availability (to 45% in 2001).

- The perceived availability of ***hallucinogens other than LSD*** followed a very similar trajectory to that of LSD from 1975 through 1986 (see Figure 9-5c) but quite a different one thereafter. From 1987 to 1995 there was a gradual rise in availability of hallucinogens other than LSD; in contrast there was a sharp rise for LSD. From 1995 to 2000, the availability of LSD showed a general decline (from 54% to 47%), while the availability of other hallucinogens changed very little (from 36% to 35%). While LSD and the other hallucinogens, taken as a set, were about equally available in the late 1970s, LSD availability was substantially higher in the 1990s. The availability of LSD declined again in 2001 (to 45%). The availability of other hallucinogens showed an apparent sharp increase in 2001, but much of the apparent increase is likely due to a question change. In 2001, the question text changed from "other psychedelics" to "other hallucinogens," and "shrooms" was added to the list of examples.

- The availability of ***ecstasy*** (***MDMA***) has risen quite dramatically during the 1990s (see Figure 9-5a). From 1989, when availability was first measured for this drug, through 1991, only 22% of twelfth graders reported easy access. Availability then rose steadily to 39% by 1997, where it remained for a couple of years. However, in 2000 it jumped dramatically to 51%. Availability of ecstasy again increased to 62% in 2001—nearly three times the 1991 level. It appears quite likely that this dramatic increase in the availability of ecstasy played an important role in the sharp increase in use since 1998.

- Between 1979 and 1987, self-reported *use* of ***PCP*** dropped substantially, before stabilizing at a very low level for some years. However, perceived availability rose from 23% in 1987 (when it was first measured) to 32% in 1992 and changed very little through 2001. (Self-reported use increased slightly from 1993 to 1996 and has been fairly level since 1997.)

- From 1975 through 1978, perceived ***heroin*** availability (see Figure 9-5b) declined some. Then a rather long, irregular, and gradual increase in perceived availability began and continued through 1992. (The 1978-1992 rise was from 16% to 35% of the seniors saying heroin would be "fairly easy" or "very easy" to get.) Despite this substantial increase in perceived availability, there was very little change in use during that period. From 1992 to 1998, perceived availability was fairly level, although use increased slightly in that interval. Both availability and use have declined since then.

  The stability of ***heroin*** use during the 1980s and early 1990s, despite a substantial increase in availability, is worthy of note. It suggests that availability alone is not sufficient to stimulate trial (though it may affect the consumption pattern of established users). It was not until the 1990s that word about methods for taking heroin other than by injection started to be widely diffused. The view that these methods were less dangerous than injection removed an important deterrent for at least some teenagers, we believe. Reports that the Taliban eradicated nearly all opium crops in Afghanistan in 2001 raised the possibility that there would be a significant decline in the availability of heroin in the ensuing years, since Afghanistan and Burma (Myanmar) are the two largest suppliers of heroin to the world market. The subsequent demise of the Taliban has made the situation much less certain, however.

- Much like heroin, ***other narcotics*** showed a gradual, upward shift in perceived availability, from 26% in 1978 to 38% in 1989, followed by some decline in 1991, followed thereafter by a second period of increase from 1991 through 2000 (44%). It then fell back to 1999 levels (41%) in 2001.

- Figure 9-5b shows that ***heroin*** and ***other narcotics*** have become much more accessible to young people since 1975, while ***barbiturates*** and ***tranquilizers*** have become much less so.

Trends in Perceived Availability for Eighth and Tenth Graders

- Because information on the perceived availability of drugs was first gathered from eighth and tenth graders in 1992, we can characterize change only since then. From 1992 to 1996, eighth and tenth graders showed a rise in the availability of several of the illicit drugs. These data are not presented graphically but are provided in Table 9-5. Availability then leveled or dropped in 1997 and since then has declined further for most of these drugs. These changes track changes in self-reported use rather well. ***Ecstasy*** is an exception in that use has risen since 1997; availability undoubtedly also rose, although because it was measured only beginning in 2001 we cannot say by how much.

- The proportion of eighth graders seeing ***marijuana*** as easy to get rose sharply between 1992 and 1996, from 42% to 55%, while among tenth graders there was an even greater increase (from 65% to 81%) over the same interval. Since then, availability has shown significant declines in both grades. Among twelfth graders, availability did not tilt down until 1999.

- Between 1992 or 1993 and 1995 or 1996, the availability of several other illicit drugs (***LSD***, ***PCP***, ***crack***, ***powdered cocaine***, ***heroin***, ***other narcotics***, and ***amphetamines***) rose modestly among eighth and tenth graders as their use increased. Both grades then showed some decline in the availability of these drugs through 1998, and most have continued to decline since.

- ***Barbiturates*** and ***tranquilizers*** did not show any increase in availability in the early 1990s in eighth or tenth grade, but both drugs did show a decline in availability after 1995 (or 1996, in the case of tenth graders). The decline in barbiturate availability continued until 2000 for eighth and tenth graders and then leveled. For eighth and tenth graders, tranquilizer availability declined through 2000; both grades showed a slight rise in 2001 (significantly so for the eighth graders). Both grades showed nonsignificant slight rises in use, as well.

- ***Ice*** has shown rather little change in availability since 1992 (when it was first measured) among eighth graders, but some modest increases occurred among tenth graders from 1993 to 1996. (Availability also rose in twelfth grade in the mid-1990s.) For the eighth graders, availability has been declining since 1999. For the tenth graders, availability, which had been fairly level since 1996, decreased significantly in 2001. (Use of ice is not assessed among eighth and tenth graders.)

- After holding fairly steady (at very high levels) for some years, the availability of ***cigarettes*** to eighth and tenth graders began to decline modestly after 1996, very likely as a result of increased enforcement of laws prohibiting sales to minors under the Synar Amendment and the FDA regulations dealing with sales to minors. Those declines have continued and have been the greatest at eighth grade.

- ***Alcohol*** has shown some rather modest declines in availability, which is down from 76% in 1992 among eighth graders to 71% in 2001. However, at tenth grade it is only slightly down from the peak level of 90% in 1996 to 88% in 2001.

The Importance of Supply Reduction Versus Demand Reduction

- Overall, it is important to note that ***supply reduction***—that is, reduced availability of drugs—does not appear to have played as major a role as many had assumed in perhaps the two most important downturns in drug use that have occurred to date, namely, those for ***marijuana*** and ***cocaine*** (see Figures 8-4 and 8-5). In the case of cocaine, perceived availability actually rose during much of the period of the downturn in use. (These data are corroborated by data from the Drug Enforcement Administration on trends in the price and purity of cocaine on the streets.[71]) In the case of marijuana, perceived availability has remained very high for twelfth graders over the last 26 years, while use dropped substantially from 1979 through 1992. Similarly, ***amphetamine*** use declined appreciably from 1981 to 1992, with only a modest corresponding change in perceived availability. Finally, until 1995, ***heroin*** use had not risen among seniors even though availability had increased substantially.

- What *did* change dramatically were young peoples' beliefs about the dangers of using ***marijuana*** and ***cocaine***. As we have been saying for some years, we believe these changes led to a decrease in use directly through their impact on the young peoples' demand for these drugs and indirectly through their impact on personal disapproval and, subsequently, peer norms. Because the perceived risk of ***amphetamine*** use was changing little when amphetamine use was declining substantially (1981-1986), other factors must have helped to account for the decline in demand for that class of drugs—quite conceivably some displacement by cocaine. Because the three classes of drugs (marijuana, cocaine, and amphetamines) have shown *different* patterns of change, it is highly unlikely that a general factor (e.g., a general shift against drug use) can explain their various trends.

- The increase in ***marijuana*** use in the 1990s among twelfth graders adds more compelling evidence to this interpretation. It was *both* preceded and accompanied by a decrease in perceived risk. (Between 1991 and 1997 there was a 21 percentage point decline in the perceived risk of regular marijuana use.) Peer disapproval dropped sharply from 1993 through 1997, *after* perceived risk began to change, consistent with our interpretation that perceived risk can be an important determinant of disapproval. Perceived availability remained fairly constant from 1991 to 1993 and then increased 7 percentage points through 1998.

- To give availability its due, we do think that the expansion in the world supply of ***heroin***, particularly in the 1990s, had the effect of dramatically raising the purity of heroin available on the streets, and thus the means available for ingesting it. The advent of non-injectable forms of heroin very likely contributed to the fairly sharp increase in heroin use in the 1990s. The evidence from this study showing that a significant portion of the self-reported heroin users in recent years are using heroin by non-injectable means lends credibility to this interpretation.

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[71] Caulkins, J. P. (1994). *Developing price series for cocaine*. Santa Monica, CA: RAND.

- We should also note that our emphasis on attitudes and beliefs does not mean that other factors, particularly price, cannot play an important role. Analyses of data from the Monitoring the Future project have shown that price probably played an important role in the decline in marijuana use in the 1980s and in changes in cigarette use in the 1990s.[72,73]

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[72] Pacula, R. L., Grossman, M., Chaloupka, F. J., O'Malley, P. M., Johnston, L. D., & Farrelly, M. C. (2001). Marijuana and youth. In J. Gruber (Ed.) *Risky behavior among youths: An economic analysis* (pp. 271-326). The University of Chicago Press. Also appears as Working Paper 7703, National Bureau of Economic Research, Inc. (2000).

[73] Tauras, J., O'Malley, P. M., & Johnston, L. D. (2001). *Effects of price and access laws on teenage smoking initiation: A national longitudinal analysis.* (ImpacTeen/Youth, Education, and Society Research Paper No. 2.) Chicago, IL: University of Illinois at Chicago and Ann Arbor, MI: Institute for Social Research.

TABLE 9-1
Trends in Proportion of Friends Disapproving of Drug Use
Twelfth Graders

Q. *How do you think your close friends feel (or would feel) about you . . .*	Percentage saying friends disapprove[a]																											
	Class of 1975[b]	Class of 1976	Class of 1977[b]	Class of 1978	Class of 1979[b]	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Trying marijuana once or twice	44.3	—	41.8	—	40.9	42.6	46.4	50.3	52.0	54.1	54.7	56.7	58.0	62.9	63.7	70.3	69.7	73.1	66.6	62.7	58.1	55.8	53.0	53.8	55.1	58.1	57.6	-0.5
Smoking marijuana occasionally	54.8	—	49.0	—	48.2	50.6	55.9	57.4	59.9	62.9	64.2	64.4	67.0	72.1	71.1	76.4	75.8	79.2	73.8	69.1	65.4	63.1	59.9	60.4	61.6	63.9	64.3	+0.4
Smoking marijuana regularly	75.0	—	69.1	—	70.2	72.0	75.0	74.7	77.6	79.2	81.0	82.3	82.9	85.5	84.9	86.7	85.9	88.0	83.5	80.6	78.9	76.1	74.1	74.7	74.5	76.1	77.8	+1.7
Trying LSD once or twice	85.6	—	86.6	—	87.6	87.4	86.5	87.8	87.8	87.6	88.6	89.0	87.9	89.5	88.4	87.9	87.9	87.3	83.5	83.4	82.6	80.8	79.3	81.7	83.2	84.7	85.5	+0.8
Trying cocaine once or twice	—	—	—	—	—	—	—	—	—	—	—	79.6	83.9	88.1	88.9	90.5	91.8	92.2	91.1	91.4	91.1	89.2	87.3	88.8	88.7	90.2	89.3	-0.8
Taking cocaine occasionally	—	—	—	—	—	—	—	—	—	—	—	87.3	89.7	92.1	92.1	94.2	94.7	94.4	93.7	93.9	93.8	92.5	90.8	92.2	91.8	92.8	92.2	-0.6
Trying crack once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94.2	95.0	94.4	94.6	95.1	93.9	93.8	93.0	92.3	93.7	93.9	94.6	92.3	-2.3s
Taking crack occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.7	96.5	95.7	95.9	96.4	95.3	96.1	94.7	94.8	96.2	96.0	96.9	95.0	-1.9s
Trying cocaine powder once or twice	—	—	—	—	—	—	—	—	—	—	—	—	—	—	91.7	93.4	93.3	94.0	94.2	93.2	93.5	92.1	91.4	91.9	91.8	93.3	91.9	-1.4
Taking cocaine powder occasionally	—	—	—	—	—	—	—	—	—	—	—	—	—	—	94.0	95.0	94.8	94.8	95.2	94.7	95.3	93.6	93.9	94.5	94.0	96.3	93.7	-2.7ss
Trying an amphetamine once or twice	78.8	—	80.3	—	81.0	78.9	74.4	75.7	76.8	77.0	77.0	79.4	80.0	82.3	84.1	84.2	85.3	85.7	83.2	84.5	81.9	80.6	80.4	82.6	83.0	84.1	83.8	-0.3
Taking one or two drinks nearly every day	67.2	—	71.0	—	71.0	70.5	69.5	71.9	71.7	73.6	75.4	75.9	71.8	74.9	76.4	79.0	76.6	77.9	76.8	75.8	72.6	72.9	71.5	72.3	71.7	71.6	73.4	+1.7
Taking four or five drinks nearly every day	89.2	—	88.1	—	88.5	87.9	86.4	86.6	86.0	86.1	88.2	87.4	85.6	87.1	87.2	88.2	86.4	87.4	87.2	85.2	84.1	82.6	82.5	82.8	82.2	82.8	84.4	+1.7
Having five or more drinks once or twice each weekend	55.0	—	53.4	—	51.3	50.6	50.3	51.2	50.6	51.3	55.9	54.9	52.4	54.0	56.4	59.0	58.1	60.8	58.5	59.1	58.0	57.8	56.4	55.5	57.6	57.7	57.8	+0.1
Smoking one or more packs of cigarettes per day	63.6	—	68.3	—	73.4	74.4	73.8	70.3	72.2	73.9	73.7	76.2	74.2	76.4	74.4	75.3	74.0	76.2	71.8	72.4	69.2	69.3	68.5	69.0	71.2	72.6	74.5	+1.9
Approx. N =	*2488*	—	*2615*	—	*2716*	*2766*	*3120*	*3024*	*2722*	*2721*	*2688*	*2639*	*2815*	*2778*	*2400*	*2184*	*2160*	*2229*	*2220*	*2149*	*2177*	*2030*	*2095*	*2037*	*1945*	*1775*	*1862*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Answer alternatives were: (1) Don't disapprove, (2) Disapprove, and (3) Strongly disapprove. Percentages are shown for categories (2) and (3) combined.

[b] These numbers have been adjusted to correct for a lack of comparability of question context among administrations. (See text for discussion.)

TABLE 9-2

Trends in Twelfth Graders' Exposure to Drug Use

(Entries are percentages)

Q. *During the LAST 12 MONTHS how often have you been around people who were taking each of the following to get high or for "kicks"?*	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Any illicit drug[a]																												
% saying not at all	—	17.4	16.5	15.1	15.0	15.7	17.3	18.6	20.6	22.1	22.3	24.5	26.1	28.7	31.4	32.4	35.8	38.7	33.9	29.2	24.7	22.0	21.2	22.8	22.1	24.0	23.5	-0.5
% saying often	—	34.8	39.0	40.7	40.4	36.3	36.1	31.4	29.8	28.3	27.2	26.3	23.3	20.8	22.0	20.7	18.2	18.0	24.0	29.3	32.3	33.8	34.7	33.2	35.6	32.6	33.6	+1.0
Any illicit drug[a] except marijuana																												
% saying not at all	—	44.9	44.2	44.7	41.7	41.5	37.4	37.5	40.6	40.2	40.7	44.7	48.3	52.2	52.9	54.6	60.0	58.4	57.4	54.7	52.8	50.3	52.1	52.7	53.5	52.8	50.1	-2.7
% saying often	—	11.8	13.5	12.1	13.7	14.1	17.1	16.6	14.2	14.6	12.9	12.1	10.2	9.6	10.7	9.2	7.9	7.5	9.6	9.4	11.1	12.1	11.7	9.9	11.7	10.5	11.9	+1.5
Marijuana																												
% saying not at all	—	20.5	19.0	17.3	17.0	18.0	19.8	22.1	23.8	25.6	26.5	28.0	29.6	33.0	35.2	36.6	40.4	43.2	39.0	32.8	27.3	24.4	23.2	24.5	24.2	26.2	25.1	-1.1
% saying often	—	32.5	37.0	39.0	38.9	33.8	33.1	28.0	26.1	24.8	24.2	24.0	20.6	17.9	19.5	17.8	16.0	15.6	20.9	27.6	30.7	31.8	32.9	31.4	34.4	30.3	30.8	+0.5
LSD																												
% saying not at all	—	78.8	80.0	81.9	81.9	82.8	82.6	83.9	86.2	87.5	86.8	86.9	87.1	86.6	85.0	85.1	84.3	82.2	79.0	75.8	73.9	72.4	74.1	76.9	76.4	78.0	78.4	+0.4
% saying often	—	2.2	2.0	1.8	2.0	1.4	2.0	1.9	1.4	1.5	1.3	1.6	1.8	1.6	2.2	2.6	2.9	3.0	3.9	4.2	6.1	4.7	5.1	3.2	4.1	3.3	2.8	-0.5
Other psychedelics																												
% saying not at all	—	76.5	76.7	76.7	77.6	79.6	82.4	83.2	86.9	87.3	87.5	88.2	90.0	91.0	91.2	90.6	90.6	90.3	87.9	86.0	84.2	83.4	82.2	84.1	82.3	83.7	71.9	—[b]
% saying often	—	3.1	3.2	2.9	2.2	2.2	2.0	2.6	1.1	1.7	1.4	1.5	1.2	1.1	1.3	1.2	1.3	1.1	1.9	2.3	2.5	2.7	2.8	1.7	2.7	2.1	3.6	—[b]
Cocaine																												
% saying not at all	—	77.0	73.4	69.8	64.0	62.3	63.7	65.1	66.7	64.4	61.7	62.6	65.1	69.8	69.8	72.3	78.7	80.2	80.8	81.2	78.4	75.0	74.4	73.4	74.2	75.8	75.5	-0.3
% saying often	—	3.0	3.7	4.6	6.8	5.9	6.6	6.6	5.2	6.7	7.1	7.8	5.9	5.1	5.4	4.7	3.4	2.7	2.9	2.5	3.2	4.0	4.2	3.7	4.6	4.6	4.5	-0.1
Heroin																												
% saying not at all	—	91.4	90.3	91.8	92.4	92.6	93.4	92.9	94.9	94.0	94.5	94.0	94.2	94.3	93.5	94.6	94.9	94.6	94.3	92.7	92.1	91.4	90.9	91.3	91.9	90.9	91.3	+0.5
% saying often	—	0.8	1.1	0.9	0.7	0.4	0.6	1.0	0.7	1.1	0.5	1.0	0.9	0.8	1.0	0.5	0.9	0.7	1.1	0.7	1.2	1.6	1.2	0.9	1.3	1.5	0.7	-0.8s
Other narcotics																												
% saying not at all	—	81.9	81.3	81.8	82.0	80.4	82.5	81.5	82.7	82.0	81.6	84.4	85.6	85.2	86.2	85.8	88.7	88.9	87.6	85.1	84.5	81.5	79.6	79.3	78.1	78.9	78.4	-0.5
% saying often	—	1.8	2.4	2.0	1.7	1.7	1.7	2.4	2.2	2.0	1.8	2.1	1.7	1.7	1.7	1.6	1.4	1.3	1.7	1.7	2.1	3.4	2.5	2.8	3.9	2.9	3.0	+0.1
Amphetamines																												
% saying not at all	—	59.6	60.3	60.9	58.1	59.2	50.5	49.8	53.9	55.0	59.0	63.5	68.3	72.1	72.6	71.7	76.4	75.5	75.3	71.8	71.9	68.5	69.0	70.1	69.9	70.5	68.5	-2.0
% saying often	—	6.8	7.9	6.7	7.4	8.3	12.1	12.3	10.1	9.0	6.5	5.8	4.5	4.1	4.7	4.1	3.1	3.0	3.9	4.1	4.5	5.6	5.2	4.7	6.3	4.4	6.0	+1.6
Barbiturates																												
% saying not at all	—	69.0	70.0	73.5	73.6	74.8	74.1	74.3	77.5	78.8	81.1	84.2	86.9	87.6	88.2	86.7	90.0	89.8	88.1	87.0	85.5	84.5	83.9	83.9	82.9	83.7	82.9	-0.7
% saying often	—	4.5	5.0	3.4	3.3	3.4	4.0	4.3	3.0	2.7	1.7	2.1	1.5	1.4	1.7	1.7	1.2	1.1	1.6	1.7	2.0	2.9	2.5	2.7	3.8	2.7	2.7	0.0
Tranquilizers																												
% saying not at all	—	67.7	66.0	67.5	67.5	70.9	71.0	73.4	76.5	76.9	76.6	80.4	81.6	81.8	84.9	83.7	85.8	87.3	86.2	83.5	84.3	82.1	81.1	82.7	81.8	82.3	76.2	—[b]
% saying often	—	5.5	6.3	4.9	4.3	3.2	4.2	3.5	2.9	2.9	2.2	2.5	2.6	2.2	2.1	1.9	1.4	1.9	1.7	1.8	2.3	3.5	3.2	2.8	3.7	3.5	4.9	—[b]
Alcoholic beverages																												
% saying not at all	—	6.0	5.6	5.5	5.2	5.3	6.0	6.0	6.0	6.0	6.0	5.9	6.1	6.9	7.7	6.4	8.3	9.4	8.2	10.0	8.8	8.5	8.6	7.8	8.2	9.3	9.2	-0.1
% saying often	—	57.1	60.8	60.8	61.2	60.2	61.0	59.3	60.2	58.7	59.5	58.0	58.7	56.4	55.5	56.1	54.5	53.1	51.9	54.0	54.0	54.5	53.9	54.5	53.5	50.2	52.7	+2.5
Approx. N =	—	*2950*	*3075*	*3682*	*3253*	*3259*	*3608*	*3645*	*3334*	*3238*	*3252*	*3078*	*3296*	*3300*	*2795*	*2556*	*2525*	*2630*	*2730*	*2581*	*2608*	*2407*	*2595*	*2541*	*2312*	*2153*	*2147*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] These estimates were derived from responses to the questions listed. "Any illicit drug" includes all drugs listed except alcohol.

[b] In 2001 the question text was changed from "other psychedelics" to "other hallucinogens" and "shrooms" was added to the list of examples. For tranquilizers, Xanax was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

TABLE 9-3

Trends in Friends' Use of Drugs as Estimated by Eighth and Tenth Graders, 1991-2001

(Entries are percentages)

Q. How many of your friends would you estimate . . .	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Smoke marijuana																								
% saying any	21.9	25.1	30.8	41.1	46.1	50.8	50.8	46.7	44.4	42.6	46.1	+3.5	48.3	45.9	52.7	63.4	68.5	73.5	73.4	70.4	70.5	70.6	72.8	+2.1
% saying most or all	3.3	4.1	6.0	10.5	12.7	15.2	13.8	12.6	12.1	10.4	11.4	+1.1	7.9	8.0	11.2	18.0	21.3	26.4	25.0	23.5	23.3	22.4	23.8	+1.4
Use inhalants																								
% saying any	20.5	23.1	26.3	29.2	32.1	32.3	32.9	31.9	31.0	29.0	29.3	+0.4	17.3	17.8	21.1	23.6	25.3	25.7	23.7	22.8	21.4	20.6	21.4	+0.8
% saying most or all	2.4	2.9	3.7	4.2	5.0	5.2	4.8	4.5	4.7	4.0	3.9	-0.1	1.4	1.5	1.8	2.0	2.1	2.2	2.2	2.5	2.1	2.2	1.8	-0.4
Take crack																								
% saying any	8.6	10.9	12.5	15.2	17.7	18.5	19.3	19.2	18.5	18.1	18.9	+0.7	13.2	13.2	15.1	17.3	19.8	21.4	22.0	22.2	21.2	21.1	21.4	+0.3
% saying most or all	0.9	1.0	1.3	1.6	1.6	2.0	1.8	1.9	1.9	1.6	2.0	+0.3	0.8	0.7	0.9	1.0	1.2	1.2	1.5	1.7	1.6	1.5	1.5	0.0
Take cocaine powder																								
% saying any	8.4	10.7	12.1	14.3	16.2	17.4	17.6	17.1	16.7	16.1	16.3	+0.2	14.7	14.1	15.4	17.3	19.7	21.7	22.5	23.0	21.0	21.2	20.9	-0.3
% saying most or all	0.9	1.1	1.3	1.7	1.6	1.7	1.6	2.0	1.8	1.6	1.8	+0.2	0.8	0.8	0.8	1.1	1.3	1.4	1.7	2.0	1.9	1.7	1.5	-0.2
Take heroin																								
% saying any	6.1	7.3	8.9	10.3	11.6	12.0	12.2	11.8	11.4	10.9	11.2	+0.2	7.8	8.1	9.3	10.5	11.1	11.7	11.8	11.5	10.7	10.1	11.4	+1.3
% saying most or all	0.7	0.9	0.9	1.3	1.3	1.4	1.2	1.3	1.3	1.1	1.4	+0.3	0.6	0.6	0.7	0.6	0.8	0.7	0.9	1.0	1.0	0.8	0.9	+0.1
Drink alcoholic beverages																								
% saying any	72.1	76.4	75.7	77.0	75.9	77.1	75.8	74.6	73.4	72.7	72.3	-0.3	92.9	91.3	91.8	92.8	92.2	92.4	92.2	91.4	91.4	92.0	91.3	-0.7
% saying most or all	21.0	23.7	25.5	27.4	27.5	28.8	25.9	25.0	24.9	23.6	22.7	-1.0	49.6	48.2	49.9	50.3	50.7	53.4	50.7	50.1	50.3	52.0	50.2	-1.9
Get drunk at least once a week																								
% saying any	42.8	48.0	48.0	50.3	48.7	51.2	48.3	47.6	48.7	46.6	45.5	-1.1	75.1	72.6	74.5	76.9	75.3	76.7	76.2	74.9	75.9	77.3	76.4	-1.0
% saying most or all	7.2	8.4	9.0	10.6	9.9	10.9	9.3	8.8	9.6	9.1	8.6	-0.6	19.3	18.6	20.2	20.3	20.6	23.1	21.8	21.2	22.8	23.5	22.4	-1.1
Smoke cigarettes																								
% saying any	67.7	72.4	73.8	76.1	76.1	78.1	76.9	75.2	70.9	67.9	64.2	-3.6	81.2	82.0	85.4	86.3	88.0	89.3	88.1	87.1	85.4	84.6	82.7	-1.9s
% saying most or all	11.8	14.4	16.7	19.0	20.5	22.5	19.7	19.4	16.4	13.0	10.6	-2.4	18.2	18.7	22.8	24.7	27.8	32.8	29.3	27.8	25.9	21.2	19.3	-1.9
Use smokeless tobacco																								
% saying any	36.5	37.5	37.3	38.6	37.8	37.9	34.5	32.7	30.0	28.0	27.3	-0.7	53.1	53.1	57.5	58.4	57.9	55.0	52.0	47.5	44.8	42.3	45.5	+3.2
% saying most or all	3.8	4.2	3.8	4.8	4.7	5.1	3.5	3.5	3.5	2.6	2.9	+0.3	7.5	7.3	7.7	7.6	7.3	6.0	6.4	5.8	4.7	4.6	5.2	+0.7
Approx. N (in thousands) =	*16.0*	*16.6*	*16.5*	*15.8*	*15.3*	*16.1*	*16.1*	*16.0*	*10.1*	*10.0*	*9.7*		*14.3*	*14.0*	*14.6*	*15.0*	*16.1*	*14.8*	*14.7*	*14.4*	*8.7*	*9.1*	*9.0*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
In 2000, this set of questions was removed from one of the four forms that had contained it, which resulted in a slight adjustment in the average change scores that year. To correct for this, although this set of questions was asked in all four forms in 1999, the data presented here for 1999 are from only the three forms in which the questions are still asked.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 9-4
Long-Term Trends in Proportion of Friends Using Drugs as Estimated by Twelfth Graders
(Entries are percentages)

Q. How many of your friends would you estimate . . .	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00-'01 change
Take any illicit drug[a]																												
% saying any	85.8	84.6	86.9	87.5	89.0	87.5	85.4	86.3	82.6	81.0	82.4	82.2	81.7	79.1	76.9	71.0	69.1	67.3	71.0	78.3	78.6	80.6	83.4	84.6	82.0	82.0	82.8	+0.7
% saying most or all	31.9	31.7	33.2	36.3	37.0	32.5	29.8	26.5	23.8	20.9	22.7	21.5	18.6	15.8	15.7	11.6	11.7	12.0	15.5	20.3	21.7	23.8	23.7	25.9	25.5	24.5	25.2	+0.8
Take any illicit drug[a] other than marijuana																												
% saying any	66.7	55.5	57.5	56.4	61.3	62.4	63.3	64.7	61.2	61.3	61.8	63.3	62.4	56.5	56.2	50.1	46.3	47.1	48.7	53.7	53.7	54.5	55.1	55.6	51.2	52.5	55.0	+2.5
% saying most or all	10.6	8.9	7.7	8.5	10.4	11.1	11.9	10.9	11.0	10.3	10.4	10.3	9.2	6.9	7.7	5.1	4.6	5.3	7.1	7.1	7.7	8.9	7.0	8.9	7.4	7.4	7.0	-0.4
Smoke marijuana																												
% saying any	83.0	82.9	85.9	86.1	87.6	86.4	83.0	84.4	80.3	77.7	79.5	79.2	78.4	75.3	72.5	68.3	65.8	63.1	67.4	75.6	76.1	78.0	81.4	83.2	80.7	80.5	81.2	+0.7
% saying most or all	30.3	30.6	32.3	35.3	35.5	31.3	27.7	23.8	21.7	18.3	19.8	18.2	15.8	13.6	13.4	10.1	10.0	10.3	13.9	18.9	20.7	22.2	22.5	23.8	24.2	23.2	24.0	+0.9
Use inhalants																												
% saying any	24.3	18.6	18.9	20.0	19.1	17.8	16.5	18.4	16.1	19.3	21.2	22.4	24.7	20.8	22.1	20.0	19.2	22.2	23.7	26.5	27.5	27.2	27.4	25.9	21.6	23.5	22.2	-1.3
% saying most or all	1.1	1.1	1.0	1.1	1.1	1.2	0.9	1.3	1.1	1.1	1.5	2.0	1.9	1.2	1.9	1.0	0.7	1.8	1.8	2.0	2.0	2.4	1.9	2.7	1.8	1.4	1.4	0.0
Use nitrites																												
% saying any	—	—	—	—	21.6	19.0	17.4	17.5	14.5	15.0	15.6	18.0	18.3	13.6	13.3	10.4	8.9	9.0	10.7	10.0	10.7	11.2	11.9	12.9	10.9	11.0	11.9	+0.9
% saying most or all	—	—	—	—	1.9	1.3	1.2	0.9	0.7	1.2	1.0	1.2	1.3	0.7	0.9	0.6	0.4	0.7	0.7	0.8	0.8	0.8	0.7	1.0	0.7	1.0	0.6	-0.3
Take LSD																												
% saying any	36.5	30.6	31.9	29.9	28.9	28.1	28.5	27.8	24.0	23.9	24.4	24.5	25.3	24.1	25.2	25.0	23.4	28.1	31.3	34.1	36.9	37.9	36.5	36.8	32.2	31.9	32.2	+0.3
% saying most or all	2.7	2.8	3.0	2.0	1.9	1.8	2.2	2.4	1.4	2.0	1.5	1.8	1.6	1.5	2.4	1.9	1.7	2.4	3.8	4.2	4.8	5.0	3.7	4.7	3.9	3.1	2.9	-0.2
Take other psychedelics																												
% saying any	41.2	30.3	31.4	29.2	28.2	28.2	26.3	25.6	22.1	21.3	22.0	22.3	21.7	17.8	18.1	15.9	15.1	17.0	19.3	21.4	23.8	26.4	26.3	27.4	22.5	24.0	35.4	—[b]
% saying most or all	4.7	3.0	2.8	2.0	2.2	2.2	2.1	1.9	1.6	1.9	1.4	1.3	1.2	0.9	1.4	1.0	0.8	1.0	1.7	2.2	2.2	2.3	2.6	3.1	2.4	2.4	2.9	—[b]
Take PCP																												
% saying any	—	—	—	—	27.8	22.2	17.2	17.3	14.2	14.2	15.9	16.1	15.5	13.5	14.7	13.0	12.0	12.7	16.6	15.5	18.3	20.3	19.7	20.2	16.8	17.5	19.1	+1.6
% saying most or all	—	—	—	—	1.7	1.6	0.9	0.9	1.1	1.1	1.2	1.2	1.1	0.8	1.2	0.5	0.5	0.9	1.9	1.2	1.2	1.3	1.4	1.6	1.5	1.7	1.3	-0.4
Take MDMA (Ecstasy)																												
% saying any	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	12.4	11.9	10.7	12.8	15.9	20.7	24.2	27.7	24.5	26.7	37.3	41.9	+4.5s
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.2	1.7	2.1	1.2	1.7	2.8	3.0	2.6	2.5	2.7	4.8	5.2	+0.4
Take cocaine																												
% saying any	33.6	28.8	30.1	33.2	38.9	41.6	40.1	40.7	37.6	38.9	43.8	45.6	43.7	37.7	37.4	31.7	26.8	26.3	24.5	26.1	24.8	28.1	28.5	31.2	27.8	27.2	27.1	-0.1
% saying most or all	3.4	3.2	3.6	4.0	6.0	6.1	6.3	4.9	5.1	5.1	5.8	6.2	5.1	3.4	3.7	2.1	1.5	1.5	2.1	1.5	2.0	2.2	2.0	3.2	2.9	2.0	1.7	-0.2
Take crack																												
% saying any	—	—	—	—	—	—	—	—	—	—	—	—	27.4	25.4	26.1	19.2	17.6	17.8	17.9	20.0	19.2	21.6	22.2	24.4	19.0	21.4	23.4	+2.0
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	2.2	1.1	2.1	0.6	0.6	0.7	0.9	1.0	1.1	0.9	1.1	1.7	1.5	1.4	0.8	-0.5
Take cocaine powder																												
% saying any	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.3	24.6	19.8	19.7	18.1	20.7	19.2	22.8	24.8	22.9	22.0	21.3	20.1	-1.2
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	2.5	1.8	2.0	1.6	1.9	1.7	1.9	2.0	1.9	1.9	1.8	1.5	-0.4

(Table continued on next page)

TABLE 9-4 (cont.)
Long-Term Trends in Proportion of Friends Using Drugs as Estimated by Twelfth Graders

Q. How many of your friends would you estimate . . .	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00-'01 change
Take heroin																												
% saying any	15.2	13.6	12.9	14.3	12.9	13.0	12.5	13.2	12.0	13.0	14.5	15.3	13.9	12.4	14.0	11.4	11.4	13.2	13.3	14.3	14.5	15.6	15.6	16.5	12.7	14.9	13.1	-1.8
% saying most or all	0.7	0.8	0.7	0.9	0.5	1.0	0.5	0.7	0.8	0.8	0.9	1.1	0.9	0.7	1.1	0.4	0.4	0.7	1.1	1.0	1.1	0.9	0.8	1.3	1.0	1.1	0.9	-0.3
Take other narcotics																												
% saying any	28.8	24.1	23.7	23.2	23.1	22.4	23.1	23.9	20.8	21.4	22.8	21.8	23.2	19.2	19.2	17.2	13.7	14.9	16.1	18.5	19.5	21.8	22.2	24.8	22.9	23.1	24.0	+0.9
% saying most or all	2.1	2.2	1.7	1.4	1.5	1.7	1.5	1.4	1.4	1.6	1.4	1.8	1.4	1.2	1.4	0.9	0.5	1.1	1.2	1.0	1.6	1.5	1.4	2.9	1.8	2.0	2.0	+0.1
Take amphetamines																												
% saying any	51.0	42.2	41.3	40.7	40.7	43.9	48.8	50.6	46.1	45.1	43.3	41.8	39.5	33.4	33.5	28.7	24.3	24.3	27.5	28.1	30.3	32.2	32.7	33.8	30.8	32.9	33.2	+0.3
% saying most or all	5.9	5.6	4.1	4.7	4.3	4.8	6.4	5.4	5.1	4.5	3.4	3.4	2.6	1.9	2.6	1.9	1.3	1.3	2.0	1.8	2.0	2.8	2.4	3.4	2.8	3.1	2.2	-0.8
Take crystal meth. (ice)																												
% saying any	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	9.1	10.2	8.9	9.4	11.8	12.9	15.9	18.6	16.8	15.7	16.9	17.0	+0.1
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.7	1.0	1.5	1.2	1.5	1.7	1.5	2.3	2.1	1.1	2.0	1.6	-0.3
Take barbiturates																												
% saying any	45.0	36.3	34.7	32.5	30.7	30.5	31.1	31.3	28.3	26.6	27.1	25.6	24.3	19.7	20.3	17.4	14.8	16.4	17.8	18.2	17.8	21.6	20.4	22.8	20.9	21.6	22.1	+0.5
% saying most or all	4.3	3.5	3.0	2.3	2.1	2.6	2.1	1.8	1.7	1.7	1.6	1.4	1.1	1.1	1.4	0.6	0.5	0.6	1.0	1.1	1.4	1.6	1.1	2.5	1.4	1.7	1.1	-0.6
Take quaaludes																												
% saying any	31.7	27.0	28.3	27.0	27.7	32.5	35.0	35.5	29.7	26.1	26.0	23.5	22.0	17.1	16.6	14.3	12.0	13.1	14.2	14.2	15.5	18.1	16.1	17.4	15.5	16.2	17.8	+1.6
% saying most or all	3.0	1.8	2.9	2.2	2.8	3.6	3.6	2.6	2.6	1.7	1.3	1.6	1.0	1.0	1.3	0.8	0.5	0.8	1.1	1.1	1.3	1.7	1.1	2.0	1.4	1.4	1.2	-0.2
Take tranquilizers																												
% saying any	45.6	36.3	37.8	34.8	32.0	29.7	29.5	29.9	26.7	26.6	25.8	24.2	23.3	19.9	18.0	14.9	13.5	14.6	15.5	16.5	15.8	18.1	17.9	19.7	16.4	19.4	18.6	-0.8
% saying most or all	3.5	3.1	2.7	1.8	2.0	1.9	1.4	1.1	1.2	1.5	1.2	1.3	1.0	0.7	1.5	0.5	0.4	0.7	0.9	0.9	1.1	1.4	0.8	2.3	1.3	2.1	1.3	-0.8
Drink alcoholic beverages																												
% saying any	96.7	95.1	94.4	94.9	95.4	96.1	94.7	95.7	95.5	94.6	94.6	95.6	95.4	95.7	95.1	92.0	91.2	90.5	88.9	90.1	90.9	89.6	90.7	91.2	90.2	89.8	89.2	-0.7
% saying most or all	68.4	64.7	66.2	68.9	68.5	68.9	67.7	69.7	69.0	66.6	66.0	68.0	71.8	68.1	67.1	60.5	58.6	56.9	57.0	59.6	56.4	56.4	60.9	61.0	58.2	57.2	59.2	+2.0
Get drunk at least once a week																												
% saying any	82.4	80.7	81.0	82.0	83.3	83.1	81.8	83.1	83.9	81.5	82.5	84.7	85.6	84.4	82.8	79.2	79.8	79.9	79.2	81.4	78.9	78.5	82.4	81.1	81.5	79.5	79.6	+0.2
% saying most or all	30.1	26.6	27.6	30.2	32.0	30.1	29.4	29.9	31.0	29.6	29.9	31.8	31.3	29.6	31.1	27.5	29.7	28.6	27.6	28.4	27.4	29.0	30.9	31.7	30.1	32.4	32.7	+0.2
Smoke cigarettes																												
% saying any	95.2	93.7	93.7	93.1	92.1	90.6	88.5	88.3	87.0	86.0	87.0	87.8	88.3	87.7	86.5	84.9	85.7	84.4	84.8	88.1	87.9	88.3	89.9	89.5	89.3	87.2	86.8	-0.4
% saying most or all	41.5	36.7	33.9	32.2	28.6	23.3	22.4	24.1	22.4	19.2	22.8	21.5	21.0	20.2	23.1	21.4	21.8	21.4	25.0	25.3	27.5	30.4	34.4	33.9	31.1	28.2	25.0	-3.1
Take steroids																												
% saying any	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.9	24.7	21.5	19.0	18.1	19.5	17.9	18.9	18.3	20.0	19.8	21.7	+2.0
% saying most or all	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.0	1.7	0.9	1.2	1.3	0.8	1.7	1.4	0.9	1.9	1.2	-0.7
Approx. N =	*2640*	*2697*	*2788*	*3247*	*2933*	*2987*	*3307*	*3303*	*3095*	*2945*	*2971*	*2798*	*2948*	*2961*	*2587*	*2361*	*2339*	*2373*	*2410*	*2337*	*2379*	*2156*	*2292*	*2313*	*2060*	*1838*	*1923*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] These estimates were derived from responses to the questions listed. "Any illicit drug" includes all of the drugs listed except MDMA (Ecstasy), cocaine powder, crystal methamphetamine (ice), alcohol, get drunk, cigarettes, and steroids. PCP and the nitrites were not included in 1975 through 1978. Crack was not included in 1975 through 1986.

[b] In 2001 the question text was changed from "other psychedelics" to "other hallucinogens" and "shrooms" was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

TABLE 9-5

Trends in Perceived Availability of Drugs by Eighth and Tenth Graders, 1992–2001

Q. *How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?*	Percentage saying "fairly easy" or "very easy" to get[a]																					
	8th Grade											10th Grade										
	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Marijuana	42.3	43.8	49.9	52.4	54.8	54.2	50.6	48.4	47.0	48.1	+1.1	65.2	68.4	75.0	78.1	81.1	80.5	77.9	78.2	77.7	77.4	-0.3
LSD	21.5	21.8	21.8	23.5	23.6	22.7	19.3	18.3	17.0	17.6	+0.6	33.6	35.8	36.1	39.8	41.0	38.3	34.0	34.3	32.9	31.2	-1.7
PCP[a]	18.0	18.5	17.7	19.0	19.6	19.2	17.5	17.1	16.0	15.4	-0.5	23.7	23.4	23.8	24.7	26.8	24.8	23.9	24.5	25.0	21.6	-3.5ss
MDMA (Ecstasy)[b]	—	—	—	—	—	—	—	—	—	23.8	—	—	—	—	—	—	—	—	—	—	41.4	—
Crack	25.6	25.9	26.9	28.7	27.9	27.5	26.5	25.9	24.9	24.4	-0.5	33.7	33.0	34.2	34.6	36.4	36.0	36.3	36.5	34.0	30.6	-3.4sss
Cocaine powder	25.7	25.9	26.4	27.8	27.2	26.9	25.7	25.0	23.9	23.9	0.0	35.0	34.1	34.5	35.3	36.9	37.1	36.8	36.7	34.5	31.0	-3.5sss
Heroin	19.7	19.8	19.4	21.1	20.6	19.8	18.0	17.5	16.5	16.9	+0.4	24.3	24.3	24.7	24.6	24.8	24.4	23.0	23.7	22.3	20.1	-2.1s
Other narcotics[b]	19.8	19.0	18.3	20.3	20.0	20.6	17.1	16.2	15.6	15.0	-0.6	26.9	24.9	26.9	27.8	29.4	29.0	26.1	26.6	27.2	25.8	-1.4
Amphetamines	32.2	31.4	31.0	33.4	32.6	30.6	27.3	25.9	25.5	26.2	+0.7	43.4	46.4	46.6	47.7	47.2	44.6	41.0	41.3	40.9	40.6	-0.3
Crystal meth. (ice)[b]	16.0	15.1	14.1	16.0	16.3	15.7	16.0	14.7	14.9	13.9	-1.0	18.8	16.4	17.8	20.7	22.6	22.9	22.1	21.8	22.8	19.9	-2.9s
Barbiturates	27.4	26.1	25.3	26.5	25.6	24.4	21.1	20.8	19.7	20.7	+0.9	38.0	38.8	38.3	38.8	38.1	35.6	32.7	33.2	32.4	32.8	+0.4
Tranquilizers	22.9	21.4	20.4	21.3	20.4	19.6	18.1	17.3	16.2	17.8	+1.5s	31.6	30.5	29.8	30.6	30.3	28.7	26.5	26.8	27.6	28.5	+0.9
Alcohol	76.2	73.9	74.5	74.9	75.3	74.9	73.1	72.3	70.6	70.6	+0.1	88.6	88.9	89.8	89.7	90.4	89.0	88.0	88.2	87.7	87.7	0.0
Cigarettes	77.8	75.5	76.1	76.4	76.9	76.0	73.6	71.5	68.7	67.7	-1.0	89.1	89.4	90.3	90.7	91.3	89.6	88.1	88.3	86.8	86.3	-0.5
Steroids	24.0	22.7	23.1	23.8	24.1	23.6	22.3	22.6	22.3	23.1	+0.8	37.6	33.6	33.6	34.8	34.8	34.2	33.0	35.9	35.4	33.1	-2.2s
Approx. N =	*8355*	*16775*	*16119*	*15496*	*16318*	*16482*	*16208*	*15397*	*15180*	*14804*		*7014*	*14652*	*15192*	*16209*	*14887*	*14856*	*14423*	*13112*	*13690*	*13518*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, (5) Very easy and (6) Can't say, drug unfamiliar.
[b] Beginning in 1993, data based on one of two forms; N is one-half of N indicated.

TABLE 9-6

Long-Term Trends in Perceived Availability of Drugs by Twelfth Graders

Percentage saying "fairly easy" or "very easy" to get

12th Grade

Q.[a] *How difficult do you think it would be for you to get each of the following types of drugs, if you wanted some?*	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Marijuana	87.8	87.4	87.9	87.8	90.1	89.0	89.2	88.5	86.2	84.6	85.5	85.2	84.8	85.0	84.3	84.4	83.3	82.7	83.0	85.5	88.5	88.7	89.6	90.4	88.9	88.5	88.5	0.0
Amyl/butyl nitrites	—	—	—	—	—	—	—	—	—	—	—	—	23.9	25.9	26.8	24.4	22.7	25.9	25.9	26.7	26.0	23.9	23.8	25.1	21.4	23.3	22.5	-0.9
LSD	46.2	37.4	34.5	32.2	34.2	35.3	35.0	34.2	30.9	30.6	30.5	28.5	31.4	33.3	38.3	40.7	39.5	44.5	49.2	50.8	53.8	51.3	50.7	48.8	44.7	46.9	44.7	-2.2
Some other psychedelic/ hallucinogen[b]	47.8	35.7	33.8	33.8	34.6	35.0	32.7	30.6	26.6	26.6	26.1	24.9	26.0	26.2	28.2	28.3	28.0	29.9	33.5	33.8	35.8	33.9	33.9	35.1	29.5	34.5	48.5	—
PCP	—	—	—	—	—	—	—	—	—	—	—	—	22.8	24.9	28.9	27.7	27.6	31.7	31.7	31.4	31.0	30.5	30.0	30.7	26.7	28.8	27.2	-1.6
MDMA (Ecstasy)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	21.7	22.0	22.1	24.2	28.1	31.2	34.2	36.9	38.8	38.2	40.1	51.4	61.5	+10.1sss
Cocaine	37.0	34.0	33.0	37.8	45.5	47.9	47.5	47.4	43.1	45.0	48.9	51.5	54.2	55.0	58.7	54.5	51.0	52.7	48.5	46.6	47.7	48.1	48.5	51.3	47.6	47.8	46.2	-1.6
Crack	—	—	—	—	—	—	—	—	—	—	—	—	41.1	42.1	47.0	42.4	39.9	43.5	43.6	40.5	41.9	40.7	40.6	43.8	41.1	42.6	40.2	-2.5
Cocaine powder	—	—	—	—	—	—	—	—	—	—	—	—	52.9	50.3	53.7	49.0	46.0	48.0	45.4	43.7	43.8	44.4	43.3	45.7	43.7	44.6	40.7	-3.8
Heroin	24.2	18.4	17.9	16.4	18.9	21.2	19.2	20.8	19.3	19.9	21.0	22.0	23.7	28.0	31.4	31.9	30.6	34.9	33.7	34.1	35.1	32.2	33.8	35.6	32.1	33.5	32.3	-1.2
Some other narcotic (including methadone)	34.5	26.9	27.8	26.1	28.7	29.4	29.6	30.4	30.0	32.1	33.1	32.2	33.0	35.8	38.3	38.1	34.6	37.1	37.5	38.0	39.8	40.0	38.9	42.8	40.8	43.9	40.5	-3.4
Amphetamines	67.8	61.8	58.1	58.5	59.9	61.3	69.5	70.8	68.5	68.2	66.4	64.3	64.5	63.9	64.3	59.7	57.3	58.8	61.5	62.0	62.8	59.4	59.8	60.8	58.1	57.1	57.1	0.0
Crystal meth. (ice)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	24.1	24.3	26.0	26.6	25.6	27.0	26.9	27.6	29.8	27.6	27.8	28.3	+0.5
Barbiturates	60.0	54.4	52.4	50.6	49.8	49.1	54.9	55.2	52.5	51.9	51.3	48.3	48.2	47.8	48.4	45.9	42.4	44.0	44.5	43.3	42.3	41.4	40.0	40.7	37.9	37.4	35.7	-1.7
Tranquilizers	71.8	65.5	64.9	64.3	61.4	59.1	60.8	58.9	55.3	54.5	54.7	51.2	48.6	49.1	45.3	44.7	40.8	40.9	41.1	39.2	37.8	36.0	35.4	36.2	32.7	33.8	33.1	-0.6
Alcohol	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	95.0	94.8	94.3	-0.5
Steroids	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	46.7	45.8	44.8	42.9	45.5	40.3	41.7	44.5	44.6	44.8	44.4	-0.4
Approx. N =	*2627*	*2865*	*3065*	*3598*	*3172*	*3240*	*3578*	*3602*	*3385*	*3269*	*3274*	*3077*	*3271*	*3231*	*2806*	*2549*	*2476*	*2586*	*2670*	*2526*	*2552*	*2340*	*2517*	*2520*	*2215*	*2095*	*1850*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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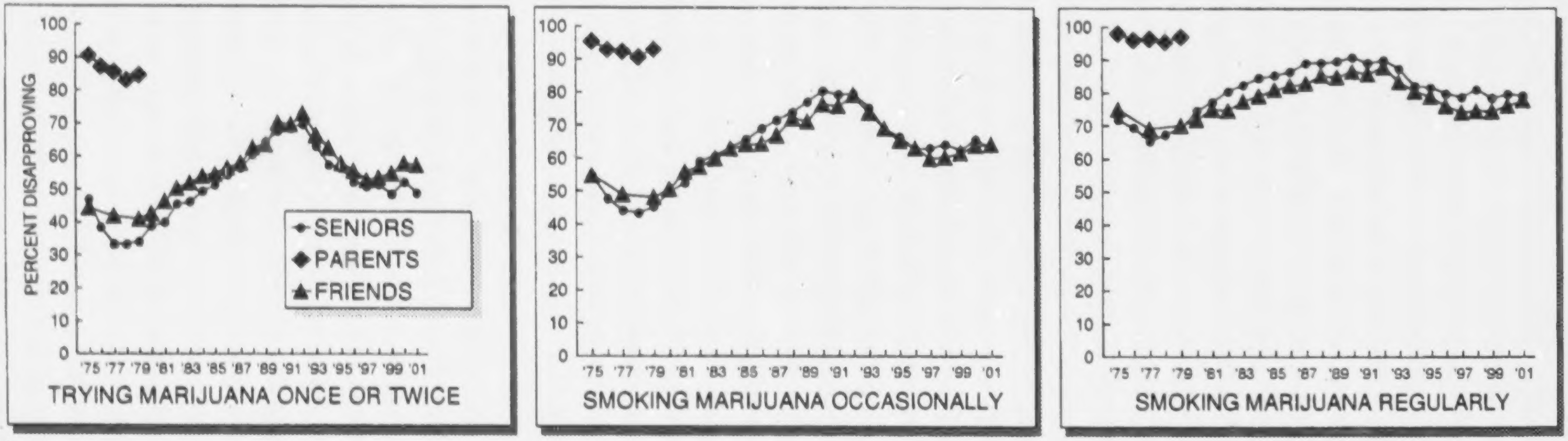
[a] Answer alternatives were: (1) Probably impossible, (2) Very difficult, (3) Fairly difficult, (4) Fairly easy, and (5) Very easy.

[b] In 2001, the question text was changed from "some other psychedelic" to "some other hallucinogen" and "shrooms" was added to the list of examples. These changes likely explain the discontinuity in the 2001 results, so the change score is not presented here.

FIGURE 9-1a

Trends in Disapproval of Illicit Drug Use

Twelfth Graders, Parents, and Peers

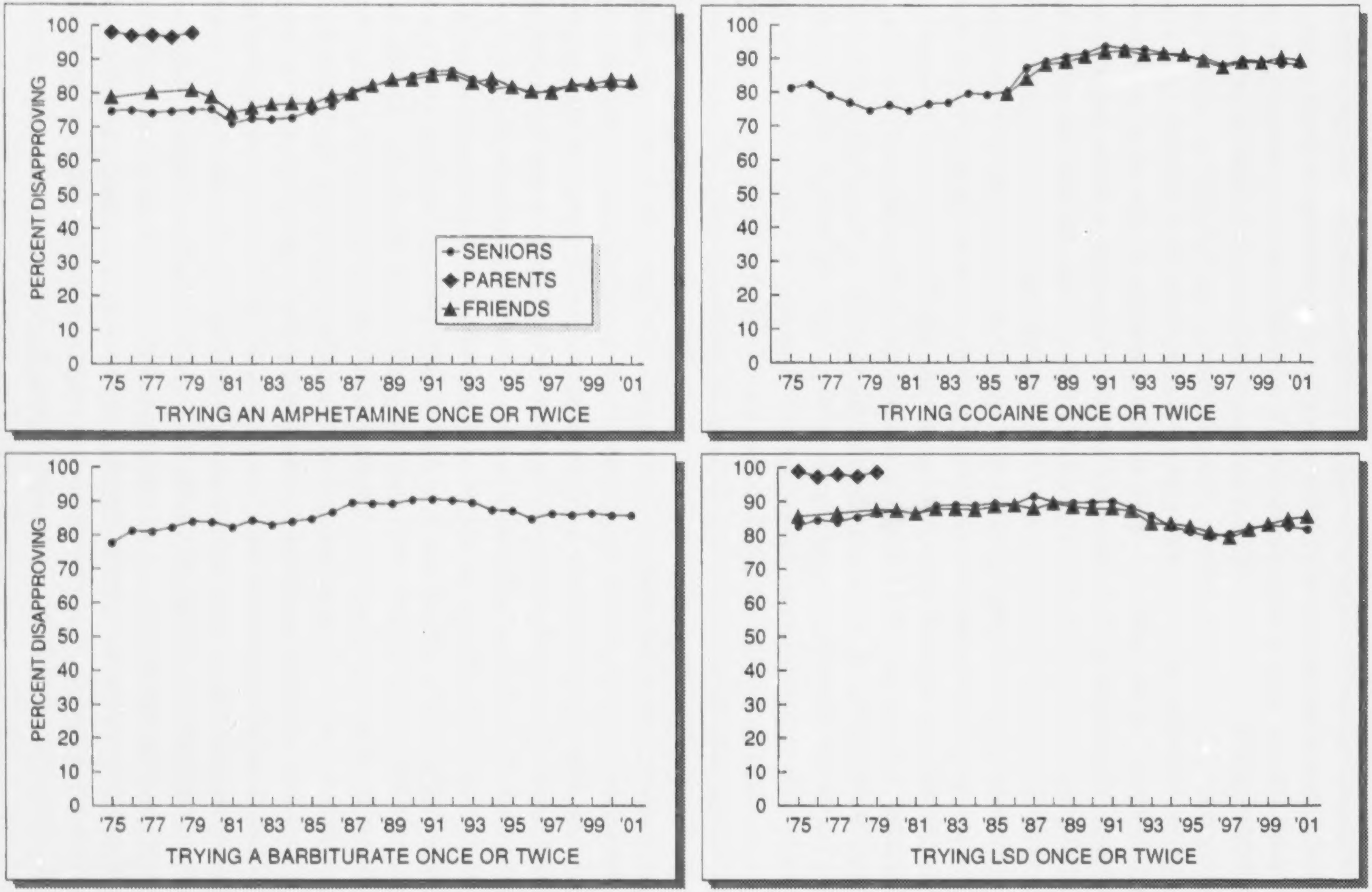


NOTE: The 1975, 1977, and 1979 points indicating the percentage of seniors who said their friends would disapprove have been adjusted to compensate for lack of comparability of question-context between administration years. (See text for discussion.)

FIGURE 9-1b

Trends in Disapproval of Illicit Drug Use

Twelfth Graders, Parents, and Peers

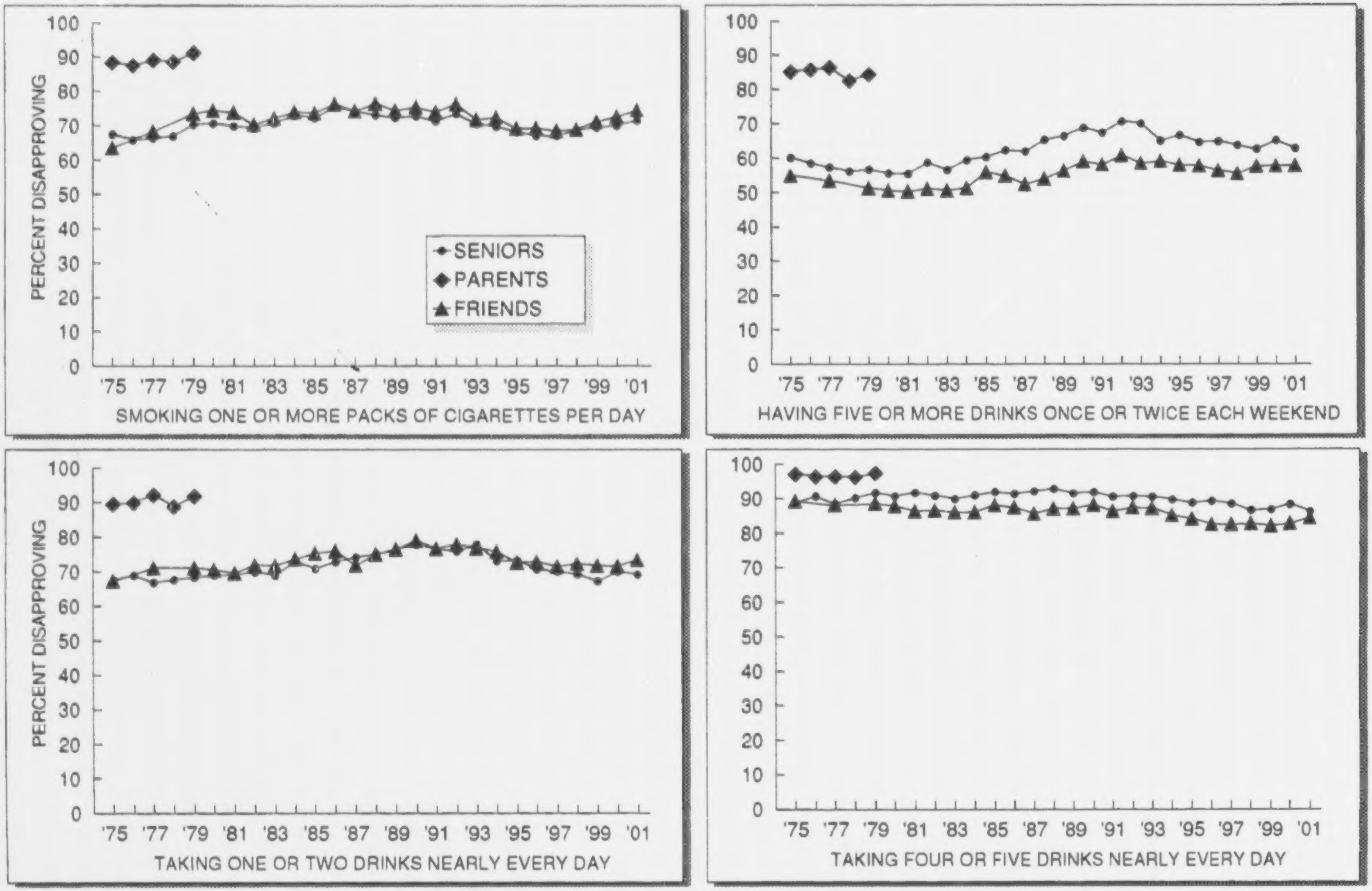


NOTE: The 1975, 1977, and 1979 points indicating the percentage of seniors who said their friends would disapprove have been adjusted to compensate for lack of comparability of question-context between administration years. (See text for discussion.)

FIGURE 9-2

Trends in Disapproval of Licit Drug Use

Twelfth Graders, Parents, and Peers



NOTE: The 1975, 1977, and 1979 points indicating the percentage of seniors who said their friends would disapprove have been adjusted to compensate for lack of comparability of question-context between administration years. (See text for discussion.)

FIGURE 9-3

Trends in Thirty-Day Prevalence of Marijuana Use and Friends' Use of Marijuana for Twelfth Graders

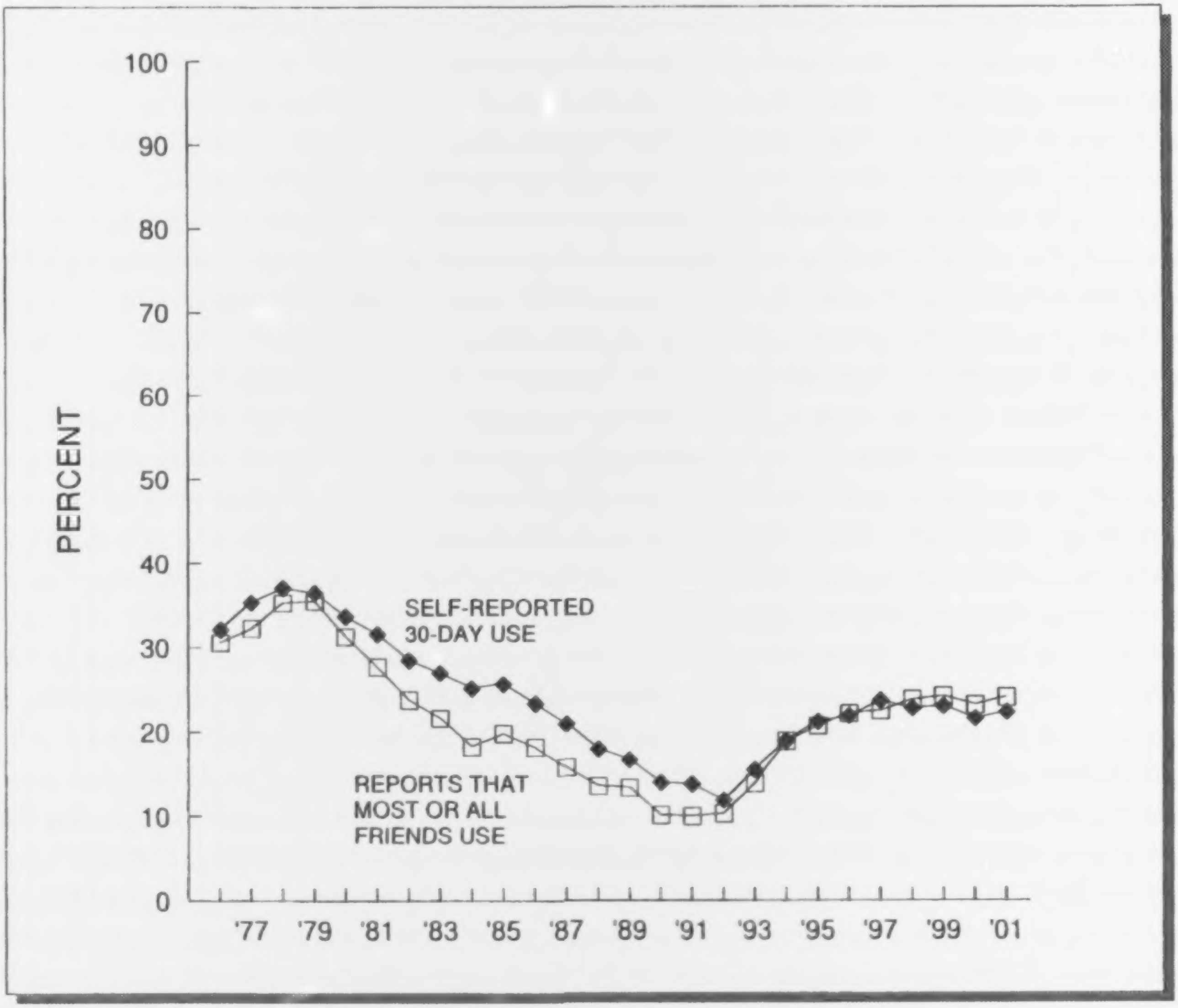
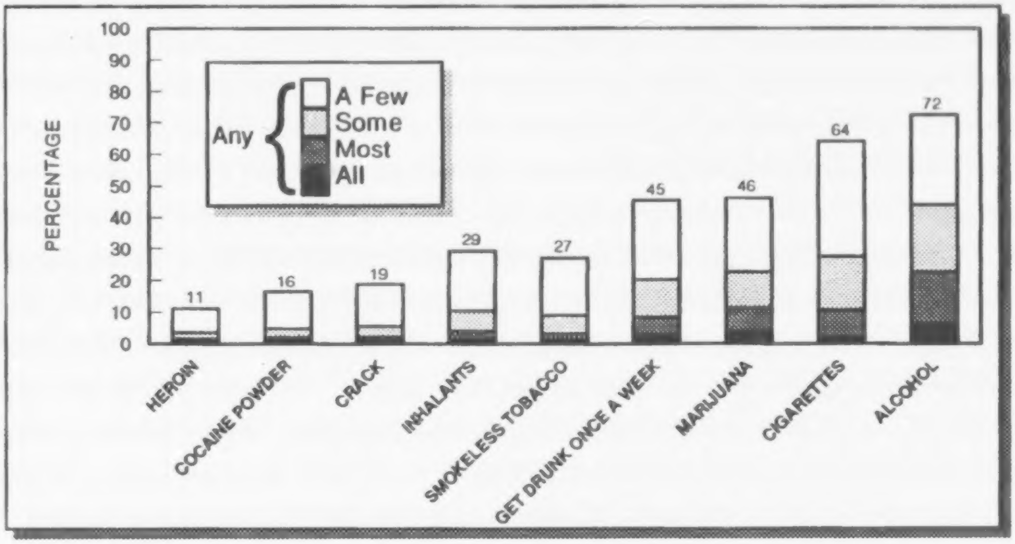


FIGURE 9-4

Proportion of Friends Using Each Drug as Estimated by Eighth, Tenth, and Twelfth Graders, 2001

Eighth Graders



Tenth Graders

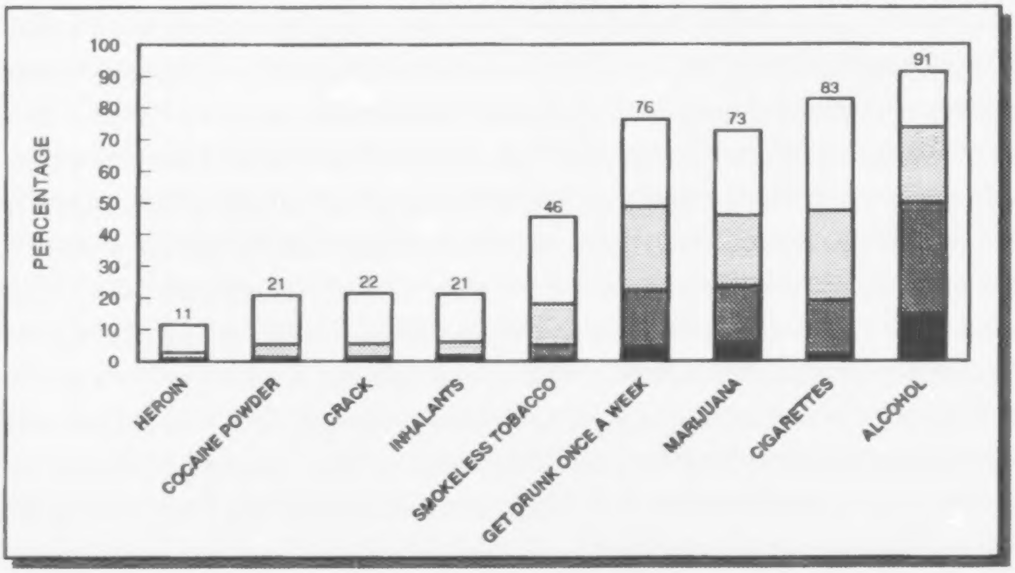


FIGURE 9-4 (cont.)

Proportion of Friends Using Each Drug as Estimated by Eighth, Tenth, and Twelfth Graders, 2001

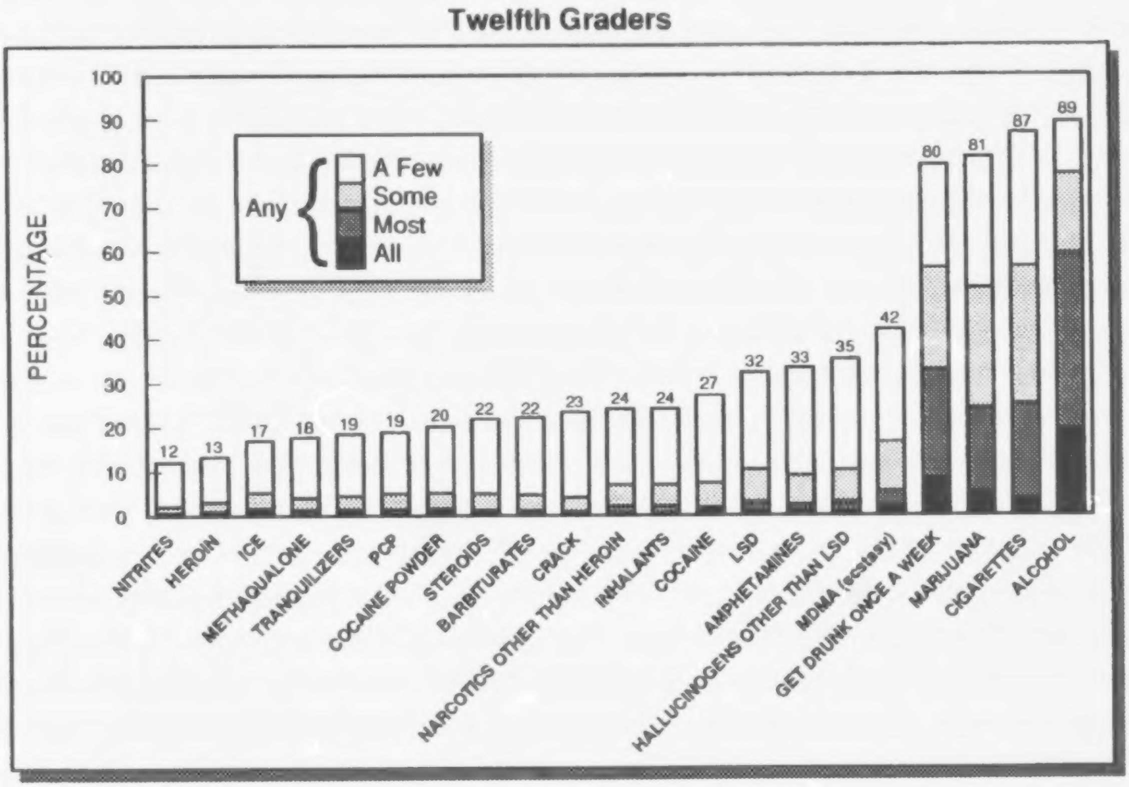


FIGURE 9-5a

Trends in Perceived Availability of Drugs for Twelfth Graders

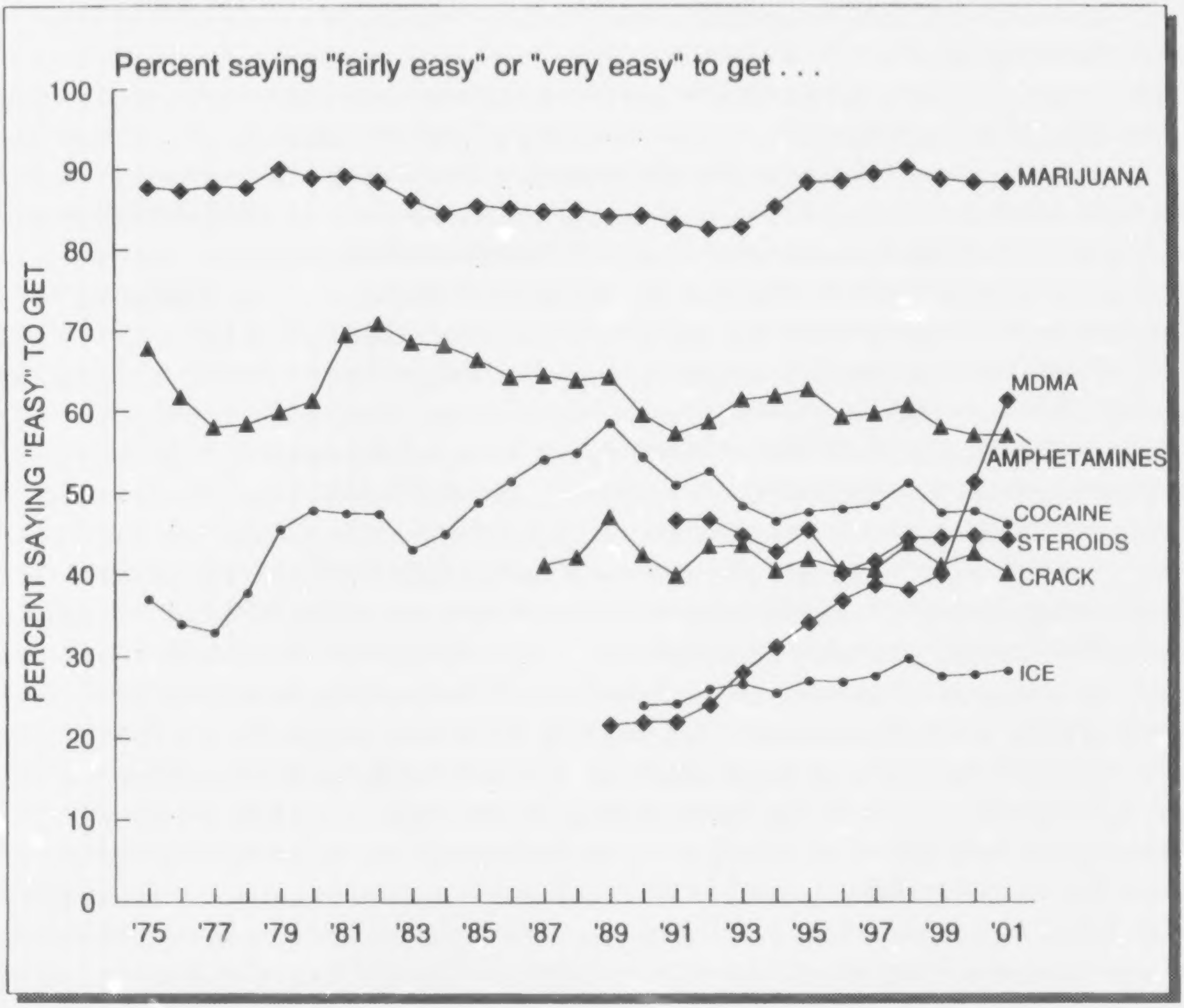


FIGURE 9-5b

Trends in Perceived Availability of Drugs for Twelfth Graders

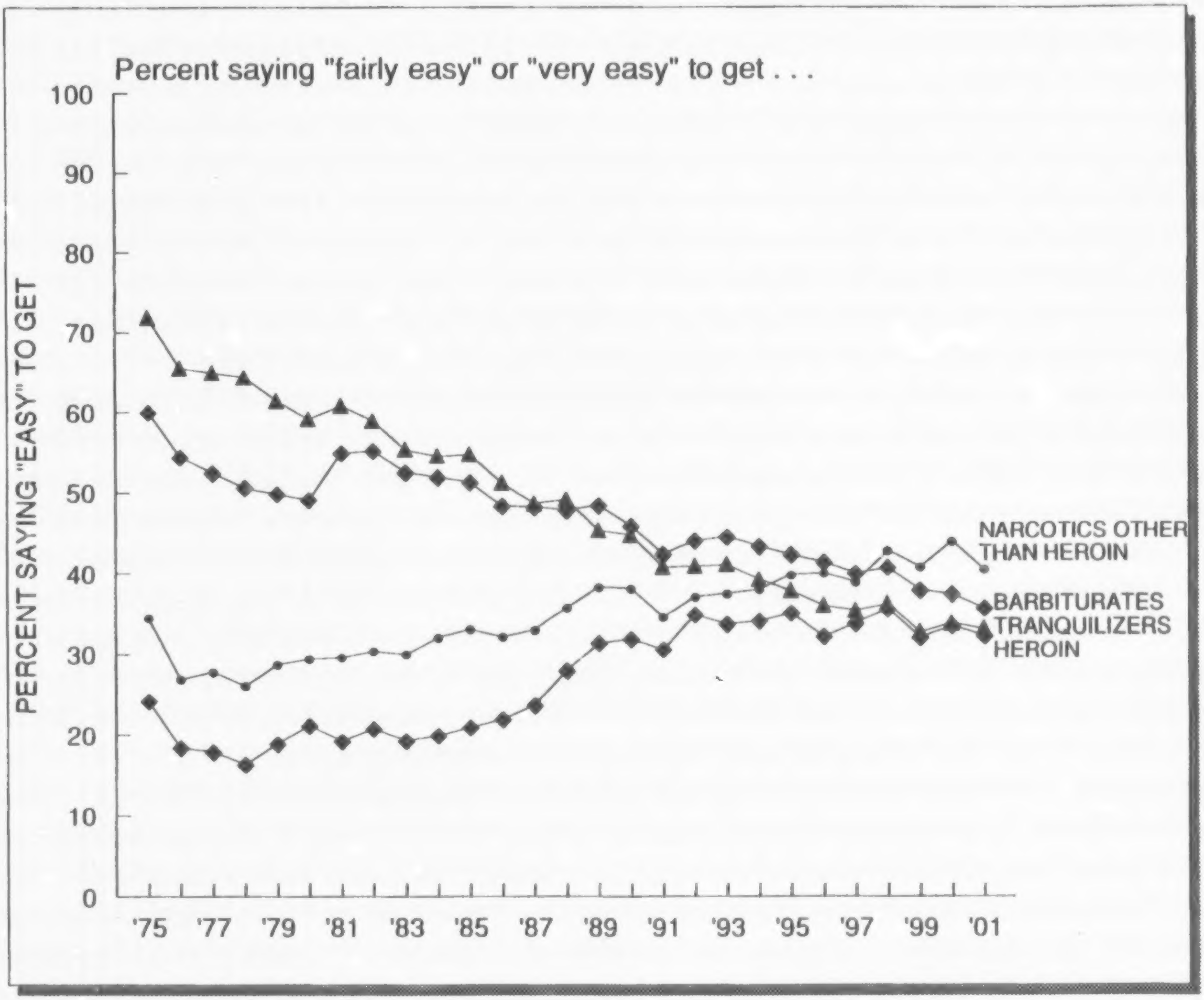


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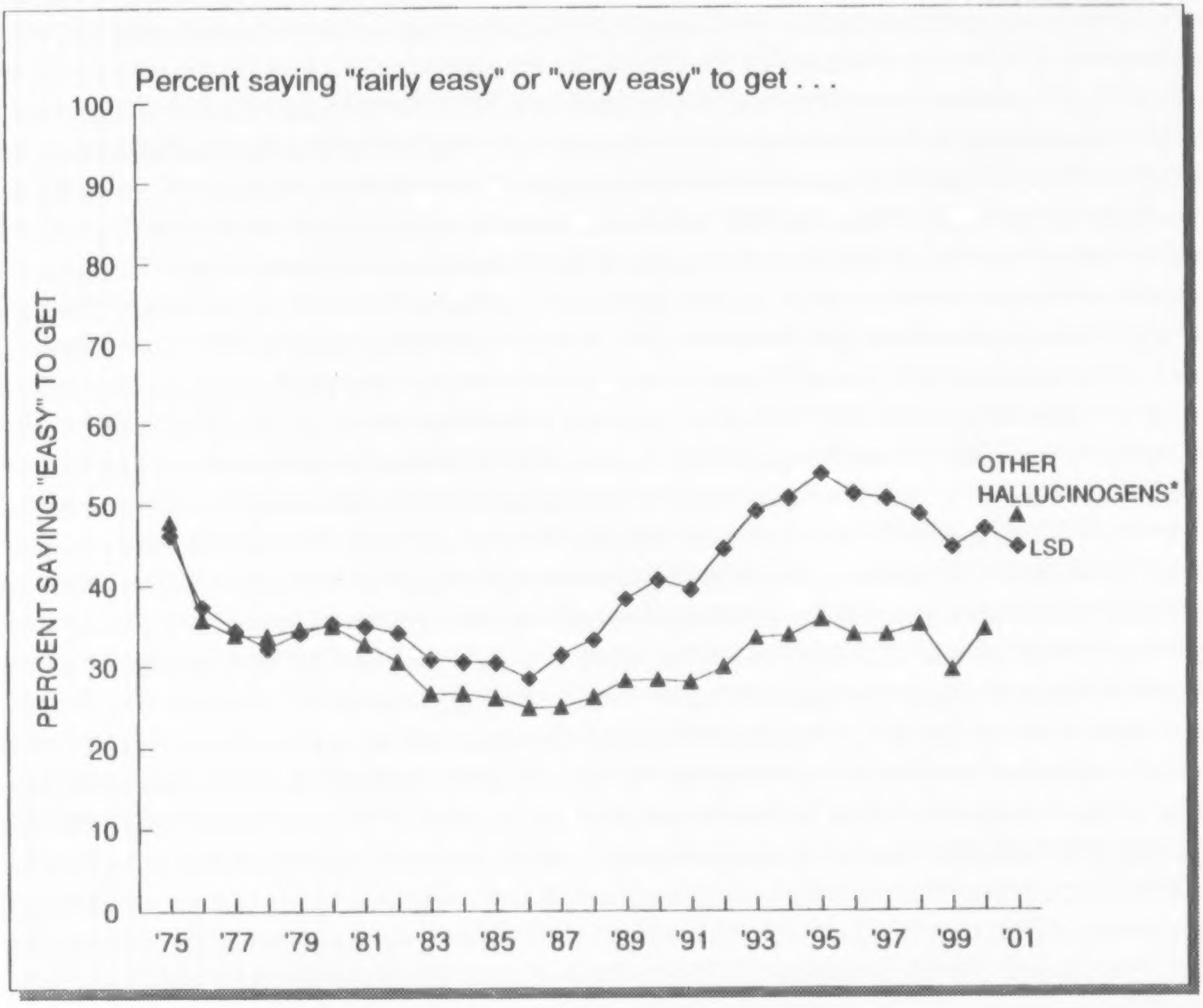
FIGURE 9-5c

Trends in Perceived Availability of Drugs for Twelfth Graders



*NOTE: in 2001 the question text was changed from "other psychedelics" to "other hallucinogens" and "shrooms" was added to the list of examples. These changes likely explain the discontinuity in the 2001 results.

Chapter 10

OTHER FINDINGS FROM THE STUDY

In addition to the data presented in the preceding chapters, the Monitoring the Future study includes many other data dealing with substance use. In this section we present findings on the use of nonprescription stimulants and the daily use of marijuana. Both represent original analyses not reported elsewhere. They are followed by synopses of some findings that *have* been presented elsewhere.

THE USE OF NONPRESCRIPTION STIMULANTS

As is discussed in other chapters of this report, between 1979 and 1981 we observed a substantial increase in reported stimulant use by high school seniors. We had reason to believe that a fair part of that increase was attributable to the use of nonprescription stimulants of two general types—"look-alike" drugs (pseudo-amphetamines, usually sold by mail order, which look like and often have names that sound like real amphetamines) and over-the-counter stimulants (primarily diet pills and stay-awake pills). These drugs usually contain caffeine, ephedrine, and/or phenylpropanolamine as their active ingredient(s).

Prompted by this development, we introduced new questions in some of the twelfth-grade questionnaire forms, beginning in 1982, in order to assess more accurately the use of amphetamines as well as to assess the use of the "look-alikes," diet pills, and stay-awake pills of the nonprescription variety. For example, in one of the twelfth-grade questionnaire forms, beginning in 1982, respondents were asked to indicate on how many occasions (if any) they had taken nonprescription diet pills such as Dietac™, Dexatrim™, and Prolamine™ (a) in their lifetime, (b) in the prior 12 months, and (c) in the prior 30 days. (These correspond to the standard usage questions asked for all drugs.) Similar questions were asked about the use of nonprescription stay-awake pills (such as No-Doz™, Vivarin™, Wake™, and Caffedrine™) and the "look-alike" stimulants. (The latter are described at some length in the actual question.)

In three of the five twelfth-grade questionnaire forms in 1982 and 1983 (and in all questionnaire forms thereafter) respondents were also asked about their use of prescription amphetamines, with explicit instructions to exclude the use of over-the-counter and "look-alike" drugs. These data have been collected only from twelfth-grade respondents.

Prevalence of Use in 2001 Among Seniors

- Tables 10-1a, 10-1b, and 10-1c contain the prevalence of use levels for these various classes of stimulants in 2001. As can be seen, a substantial proportion of twelfth-grade students (17%) has used over-the-counter ***diet pills*** and 6% have used them in just the past month. Some 0.7% of seniors reported using them daily.

- Based on the data presented earlier in this report, we know that very similar proportions are using actual ***amphetamines*** outside of medically prescribed use: twelfth graders' self-reported prevalence rates in 2001 were 16% lifetime, 6% monthly, and 0.5% daily use.

- Currently, ***stay-awake pills*** are the most widely used type of stimulant, with 26% lifetime, 7% monthly, and 0.5% daily prevalence rates.

- Somewhat fewer students knowingly used the "***look-alikes***" than used diet pills or amphetamines (adjusted), with 10% lifetime, 3% monthly, and 0.3% daily prevalence rates. Of course, it is probable that some proportion of those who thought they were getting real amphetamines were actually sold look-alikes, which are far cheaper for drug dealers to purchase.

- In 1983, the newly revised question on ***amphetamine*** use yielded prevalence estimates about one-quarter to one-third lower than those yielded by the original version of the question, indicating that, indeed, some distortion in the unadjusted estimates occurred as a result of respondents including some nonprescription stimulant use. However, we believe that there should be little or no such distortion in recent years, primarily due to improvement in the questions but also to the considerable decline in use of diet pills and look-alikes, as is discussed later.

Subgroup Differences

- Tables 10-1a through 10-1c show the prevalence figures for these drug classes for ***males and females*** separately. It can be seen that the use of ***diet pills*** is dramatically higher among females than males. In fact, the absolute prevalence levels for twelfth-grade females are impressively high; 24% reported some experience with them and 8%—or about one in every twelve or thirteen females—reported use in just the last month. For all other types of stimulants, the prevalence rates for both sexes are fairly close.

- A similar comparison between those planning four years of college (referred to here as the "college-bound") and those who are not has shown some differences in use of nonprescription stimulants in the past (Tables 10-2a through 10-2c). The results generally have shown little difference between these two groups in their use of ***stay-awake pills***: the annual prevalence rate in 2001 is 19% for the noncollege-bound versus 17% for the college-bound. Use of ***diet pills*** has been slightly higher among the college-bound for the last several years (12% versus 9% among the non-college-bound in 2001). The use of "***look-alikes***" is higher among the noncollege-bound (10% versus 6%).

- There are some modest regional differences in annual prevalence of ***diet pills***, with the North Central region at 16%, the Northeast region at 13%, the South at 10%, and the West at 9%. For ***stay-awake pills***, the North Central has the highest prevalence rate at 24%, with the other regions ranging from 12% to 15%. The "***look-alikes***" show little regional differences, ranging from 6% to 8%.

- With regard to community size, annual prevalence of ***diet pills*** and "***look-alikes***" do not differ significantly among the three levels. The use of ***stay-awake pills*** currently is highest in the nonmetropolitan areas.

- African American students are substantially lower in their use of all three types of over-the-counter stimulants than are Whites, and they have been for a long time (Tables 10-2a through 10-2c). Hispanics have tended to be in the middle.

- The use of all of the nonprescription stimulants (i.e., ***diet pills***, ***stay-awake pills***, and "***look-alikes***") is substantially higher among those who have used illicit drugs than among those who have not, and it is highest among those who have become most involved with illicit drugs (see Table 10-3). For example, only 2% of twelfth graders who have abstained from any illicit drug use report ever having used a "***look-alike***" stimulant, compared to 7% of those who report having used only marijuana and 27% of those who report having used some illicit drug other than marijuana (usually in addition to marijuana). We already know that use of all of the illicit drugs is correlated with two legal drugs—alcohol and cigarettes. These findings show that the constellation of correlated substance-using behaviors also includes the use of the over-the-counter psychoactive substances.

Trends in Use Among Seniors

- The questions on amphetamine use were revised in 1982 to eliminate the inappropriate reporting of the use of nonprescription stimulants. It is worth noting that the 1982 figures for the use of ***amphetamines*** *adjusted* (i.e., excluding the use of nonprescription stimulants) were higher than the *unadjusted* figures for all years prior to 1980. (See Tables 5-1 through 5-4 in Chapter 5.) This suggests that amphetamine use indeed increased between 1979 and 1982—or at least increased in the use of what, to the best of the respondents' knowledge, were amphetamines. Not all of the increase in amphetamine use was artifactual. The data presented earlier on the proportion of seniors who were around people using amphetamines to "get high" support this conclusion (see Chapter 9).

- The longer-term trends for the "***look-alikes***" seem to parallel pretty closely the long-term trends for illicit drug use. There was a decline in annual prevalence from 10.8% in 1982 to 5.2% in 1991, followed by some increase (to 6.8% in 1995) and then some fall off (to 5.8% in 2000). In 2001, annual prevalence rose to

7%. Most of the initial decline in rate of use occurred among those who had used illicit drugs other than marijuana—the group primarily involved in the use of look-alikes. Further, that group was a shrinking proportion of the total (see Table 10-1c).

- The use of ***diet pills*** decreased even more substantially, in this case between 1983 and 1993. Over that interval, annual prevalence fell from 21% to 8%. Nearly all the decline occurred among the group who had used illicit drugs other than marijuana. After 1991, use rose some (to 10% in 1995), and it has continued to rise a bit (reaching 12% in 2001, see Table 10-1a).

- Unlike the use of other nonprescription stimulants, the use of ***stay-awake pills*** *increased* substantially in the early to mid-1980s (see Table 10-1b). The annual prevalence of use increased from 12% in 1982 (when use was first measured) to 26% in 1988, dropped back somewhat, to 20% by 1992, and remained fairly level for several years before dropping back to 15% in 2000. It now stands at 17%. (Both the increase and decrease were observed most strongly among those who had used illicit drugs.)

Trends in Subgroup Differences

- All subgroups (defined by gender, college plans, region of the country, population size, parental education, and race/ethnicity) showed similarly large increases from 1982 to 1988 in their use of ***stay-awake pills***. All subgroups' annual prevalence of use decreased between 1988 and 1992, with the exception of one of the parental education groups, though there was rather little decrease in the North Central region. After 1992, use stabilized in virtually all subgroups until the 1999 decline, which also occurred broadly.

- For ***diet pills***, trends for subgroups parallel the overall trends across time for the most part. In 2001 there were significant increases in the use of diet pills in the Northeast and in the large cities, and a significant decline in one of the parental education groups.

- Subgroup differences in trends in the use of "***look-alikes***" also generally reflect the overall trends. Females and those in the large cities had significant increases in use in 2001.

PERFORMANCE-ENHANCING SUBSTANCES: "ANDRO" AND CREATINE

In seeking a better understanding of the increase in recent years of teen steroid use, we added a single "tripwire" question about the use frequency of ***androstenedione*** (a precursor that the body can convert to anabolic steroids), since presumably it is used for many of the same purposes as anabolic steroids. As is discussed in Chapter 4, a minority of those reporting steroid use in the

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prior 12 months also report androstenedione use in that same period, and a minority of those reporting andro use also report anabolic steroid use. This overlap introduces the possibility of some double counting of events in the two questions; but the majority of use is not overlapping. The annual prevalence rates for androstenedione (andro) are 1.1%, 2.2%, and 3.0% in grades 8, 10, and 12. However, since use is primarily concentrated among males, their prevalence is higher: 1.3%, 3.5%, and 5.3% in grades 8, 10, and 12, respectively, compared with 1.0%, 0.9%, and 0.7% for girls in those same grades. In other words, a significant number of American males today takes andro during their school years.

Because andro is often taken for performance enhancement and physical enhancement, we decided to examine teens' use of another substance that is used for the same purposes—***creatine***. This substance is not a hormone or drug, but a nutrient found in the skeletal muscle of most animals. Creatine is used to enhance performance capacity and reduce the recovery time of muscles, as well as to increase muscle mass. It is readily available over the counter, which undoubtedly helps to explain the high levels of use we found among teens. The annual prevalence of use in 2001 was 2.7%, 7.9%, and 11.7% in grades 8, 10, and 12, respectively. Again, the use rates are substantially higher for boys: 5%, 15%, and 22% in those three grades, versus 0.9%, 1.7%, and 2.0% for girls. In other words, nearly a quarter of all twelfth-grade boys have used creatine in just the prior twelve months—which seems a very high prevalence, considering that the long-term effects of this substance apparently have not been well researched.

As we suspected, there is a strong association between andro use and creatine consumption. The great majority of andro users in the prior 12 months indicate that they also used creatine in the same period: 64%, 85%, and 97% in grades 8, 10, and 12, respectively. The association is asymmetric, however, because there are many more creatine users than andro users. Of those reporting creatine use in the prior 12 months, the proportions reporting andro use in the same interval were 25%, 23%, and 23% in grades 8, 10, and 12.

The self-reported use of steroids is likewise associated with creatine use. Of those using steroids in the prior 12 months, the proportions also reporting creatine use were 44%, 49%, and 66% in the three grades. Conversely, the proportions of creatine users in the past 12 months reporting steroid use in that interval were 25%, 14%, and 11%. Thus relatively few creatine users are using steroids in these populations, and more of them are taking andro. However, the great majority of andro users are also taking creatine, while roughly half of the anabolic steroid users are.

THE USE OF MARIJUANA ON A DAILY BASIS

In much earlier reports in this series, we summarized a number of findings regarding daily marijuana users, including what kind of people they are, how use changes after high school for different subgroups, and what daily users see as the negative consequences of their use.[74] In

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[74] For the original reports see the following, which are available from the author: Johnston, L. D. (1981). Frequent marijuana use: Correlates, possible effects, and reasons for using and quitting. In R. DeSilva, R. Dupont, & G. Russell (Eds.), *Treating the marijuana dependent person* (pp. 8-14). New York: The American Council on Marijuana. Also see Johnston, L. D. (1982). A review and analysis of recent changes in marijuana use by American young people. In *Marijuana: The national impact on education* (pp. 8-13). New York: The American Council on Marijuana.

1982, a special question segment was introduced in one twelfth-grade questionnaire form to secure more detailed measurement of individual patterns of daily marijuana use. More specifically, respondents were asked (a) whether at any time during their lives they had ever used marijuana on a daily or near-daily basis for at least a month and, if so, (b) how recently they had done so, (c) when they first had done so, and (d) how many total months they had smoked marijuana daily, cumulating over their whole lifetime. The results of our analyses of those data follow.

Lifetime Prevalence of Daily Marijuana Use Among Seniors

- ***Current daily marijuana use***, defined as use on 20 or more occasions in the past 30 days, has fluctuated widely since the study began, as we know from the trend data presented in Chapter 5. Among twelfth-grade respondents, it rose from 6% in 1975 to 10.7% in 1978, declined to 1.9% by 1992, and then began to increase again. In 1999, it stood at 6%, the highest prevalence rate since 1982. There was no further change in 2000 and only a very slight decline in 2001 (to 5.8%).

- Using the newer questions on duration of daily use, we have found that, since 1982, the ***lifetime prevalence of daily marijuana use for a month or more*** has been far higher than current daily marijuana use—for example, at 18% in 2001 (almost one in every five seniors) versus 6% for current daily use. In other words, the proportion that described themselves as having been daily or near-daily users at some time in their lives is three times as high as the number who described themselves as current daily users.

  However, we believe it very likely that this ratio has changed dramatically over the life of the study as a result of the large secular trends in daily use. Therefore, it would be inaccurate to extrapolate, for example, that the lifetime prevalence of daily use for the class of 1978 was three to four times their 10.7% current use figure for that year. (An investigation of data from a follow-up panel of the class of 1978 confirms this assertion.)

  Utilizing data collected in 1989 from follow-up panels from the graduating classes of 1976 through 1988 combined, we found that the lifetime prevalence of daily marijuana use for these graduates (ranging in age from about 19 to 31) was 20%. Approximately one-fourth of the older portion of that group—graduates from the classes of 1976 through 1979—indicated having been daily marijuana users for a month or more at some time in their lives.

Grade of First Daily Marijuana Use

- Of the 2001 seniors who reported being daily marijuana users at some time in their lives (i.e., 18% of the sample), over half (63% of all daily users, or 11.4% of all seniors) began that pattern of use *before* tenth grade. We are confident that different graduating classes show disparate age-associated patterns of onset, depending on the secular trends and, to a lesser degree, cohort effects. The percentages of all seniors in 2001 who started daily marijuana use in each grade level are presented in Table 10-4. It may be seen that a substantial proportion began such daily marijuana use in grades 7 through 9 (10% of all boys and 8% of all girls).

Recency of Daily Marijuana Use by Seniors

- More than half (66%) of those twelfth graders who reported *ever* having been daily marijuana users (for at least a one-month interval) have used marijuana that frequently in the past year. One-third (35%) of them said they last used the drug that frequently "about two years ago" or longer.

- About one-third (30%) of all seniors who said they have ever been daily marijuana users for a month or more (5.4% of the entire sample) classified themselves as having used it daily or almost daily "during the past month." Our operational definition of current daily users on the standard prevalence and frequency of use questions—20 or more uses in the last 30 days—yields a 5.8% rate in 2001, very close to the 5.4% rate based on the respondents' own definition. In fact, these two rates generally have been quite close across the years.

Duration of Daily Marijuana Use by Seniors

- It seems likely that the most serious long-term health consequences associated with marijuana use will be directly related to the duration of heavy use, and in the late 1970s there was considerable concern that a large population of chronic heavy users would evolve. Thus, a question was introduced asking respondents to estimate the *cumulative* number of months they have smoked marijuana daily or nearly daily. While hardly an adequate measure of the many possible cross-time patterns of use, this question does provide a gross measure of the total length of exposure to heavy use.

- Table 10-4 gives the distribution of answers to this question. It shows that of the 18% of 2001 seniors with any daily marijuana use experience lasting a month or more, more than half (61%) reported that their intervals of daily use totaled "about one year" or less. (Nearly one-quarter, or 23%, used marijuana daily less than three months cumulatively.) Slightly more than a quarter (28%, or 5.1% of *all* seniors) used marijuana daily "about two years" or more cumulatively. Fortunately, only about one percent (0.8%) reported daily use of the drug for a total of 6 years or longer, but the fact that one in twenty seniors today has smoked marijuana daily for two years or more may come as a shock to many.

Subgroup Differences

- There is some ***gender difference*** in the proportion having ever been a daily marijuana user (20.3% for males and 13.8% for females), and the cumulative duration of daily use is somewhat longer for males. (The gender differences have been larger in many previous years.)

- Whether or not the student has ***college plans*** is strongly related to lifetime prevalence of daily marijuana use, as well as to current prevalence. Of those planning four years of college, 13.8% had used marijuana daily compared with 22.8% of those without such plans. In addition, the college-bound users show a distinctly shorter cumulative duration of use, and a lower proportion of them used marijuana daily during the past month. Among those in each group who did use the drug daily, the age-at-onset is younger for the noncollege-bound (see Table 10-4).

- At present there are some ***regional differences*** in lifetime prevalence of daily marijuana use. The South is lowest (at 13%), followed by the North Central (18%), the West (21%), and the Northeast (23%).

- The differences in lifetime daily marijuana use associated with ***urbanicity*** are modest (as is true for current daily use). Lifetime prevalence of daily marijuana use is 20% in the large cities, 18% in the smaller cities, and 17% in the nonurban areas.

Trends in Use of Marijuana on a Daily Basis

- Table 10-5a presents trend data on the lifetime prevalence of ***daily marijuana*** use for a month or more. It shows a large decline from 1982, when this measure was first used, through 1992—from 21% to 8%. By 1997 it had risen substantially to 19%, before leveling (18% by 2001).

- Between 1982 and 1992, the decline in lifetime prevalence of ***daily marijuana*** use was slightly stronger among males (from 20% to 8%) than among females (from 18% to 8%); the absolute drop was larger among the noncollege-bound (23% to 11%) than among the college-bound (14% to 6%), although the proportional drop was not. In the turnaround that began in 1993, most of the increase appears to have occurred among the males and the noncollege-bound, who are now at 20% and 23%, respectively.

- Lifetime prevalence of ***daily marijuana*** use had dropped in all four regions of the country. Between 1982 and 1992, it dropped in the Northeast, North Central, and South, and between 1982 and 1990, it dropped in the West. The decline was greatest in the Northeast, where it dropped from 25% in 1982 to 9% in 1992. The current daily use measure in this question set shows the recent turnaround occurring in all regions since 1991 or 1992, with steady increases through 1997. A leveling and possible decline was observable in 1998, however. The Northeast and North Central regions showed some rise in 2001 (non-significant).

- All three population density levels exhibited long-term declines in ***lifetime daily marijuana use*** from 1982 to 1992, and all showed an increase thereafter, until 1998, when a leveling or decline was observed in all three strata.

- ***Daily prevalence of marijuana use*** *prior to tenth grade* declined from 13% in the class of 1982 to 5% in the class of 1993. (This corresponds to people who were ninth graders between 1979 and 1990.) The decline in earlier use halted among the twelfth graders surveyed in 1993, and prevalence then began to climb through 2001. Subgroup trends may be examined in Table 10-5b.

OTHER PUBLICATIONS FROM THE STUDY

A number of other publications emanate from the Monitoring the Future study each year. Further details, as well as a more complete listing, may be found on the project's Web site: www.monitoringthefuture.org.

Substance Use Among College Students[75]

This article provides information on the extent of alcohol and other drug use among American college students. In addition to Monitoring the Future, four other sources of information were examined: Harvard School of Public Health College Alcohol Study (CAS), the Core Institute (CORE), National College Health Risk Behavior Survey (NCHRBS), and National Household Survey on Drug Abuse (NHSDA).

The article provides more detailed information about subgroup differences than is normally reported in Volume II of this monograph series. Results show that alcohol use rates are very high among college students: approximately two of five American college students were heavy drinkers, defined as having had five or more drinks in a row in the past two weeks. Alcohol use is higher among male than among female students. White students are highest in heavy drinking, African-American students are lowest, and Hispanic students are intermediate. Use of alcohol, but not cigarettes, marijuana, and cocaine, is higher among college students than among noncollege age-mates. Longitudinal data show that while in high school, those who will later be college students are lower in their rates of heavy drinking than are those who will not be college students at the later point. Both groups increase their heavy drinking after high school graduation, but the college students increase distinctly more, and actually surpass their nonstudent age-mates.

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[75] O'Malley, P. M., & Johnston, L. D. (2002). Epidemiology of alcohol and other drug use among college students. *Journal of Studies on Alcohol, Supplement No. 14*, 23-39.

Adolescent Marijuana Use and Adult Occupational Attainment[76]

In this article we examined the relationship of marijuana use by high school seniors to occupational attainment ten years later. Analyses were conducted separately by gender, with and without controlling for other variables; we used a parallel log-odds model for dependence of cross-classifications having ordered categories. Control variables, all measured when respondents were seniors, were academic performance, educational aspirations, and occupational aspirations. Results indicate that the influence of marijuana use on occupational attainment was considerably different for males and females. For males the bivariate relationship between marijuana use and occupational attainment was depicted by a threshold model in which no or light marijuana use does not predict level of occupational attainment. Once a threshold level is passed (three occasions of marijuana use in the last year), increasing marijuana use predicts linearly to decreasing occupational attainment. This relationship did not persist when control variables were entered, which implies that any influence of marijuana use on occupational attainment occurs indirectly by reducing school performance and lowering educational as well as occupational aspirations. For females the bivariate relationship between marijuana use and occupational attainment was more complex, suggesting a range of possible negative and neutral relations.

Part-Time Work and Hurried Adolescence: The Links Among Intensity, Social Activities, Health Behaviors, and Substance Use[77]

This article explored possible reasons why substance use is higher among eighth-, tenth-, and twelfth- grade students who report working long hours in part-time jobs during the school year. The analysis indicated that adolescents working long hours in jobs spent less time on health behaviors and school-related activities, but nevertheless found time to keep up active social lives. It appeared that a combination of "time trade-off" and "precocious development" perspectives was useful in explaining portions of the relationships between work intensity and substance use.

Preventing Substance Abuse Among African American Children and Youth: Race Differences in Risk Factor Exposure and Vulnerability[78]

The accurate identification of risk factors is central to the development of effective efforts to prevent young people from using alcohol, tobacco, and other substances. To date, a key limitation of the prevention literature has been the paucity of research that examines the extent to which substance use risk factors identified in studies of White adolescents generalize to African American (and other non-White) youth. In the absence of research on race differences in risk factor exposure and vulnerability, current preventive interventions are based on the implicit assumptions that 1) the risk factors for African American and White adolescents' substance use are identical, and 2) that African American and White adolescents are equally exposed and equally vulnerable to these risk factors.

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[76] Schuster, C., O'Malley, P. M., Bachman, J. G., Johnston, L. D., & Schulenberg, J. (2001). Adolescent marijuana use and adult occupational attainment: A longitudinal study from age 18 to 28. *Substance Use & Misuse 36*(8), 997-1004.

[77] Safron, D. J., Schulenberg, J. E. & Bachman, J. G. (2001). Part-time work and hurried adolescence: The links among intensity, social activities, health behaviors, and substance use. *Journal of Health and Social Behavior, 42*, 425-449.

[78] Wallace, J. M., Jr., & Muroff, J. R. (2002). Preventing substance abuse among African American children and youth: Race differences in risk factor exposure and vulnerability. *The Journal of Primary Prevention 22*(3), 235-261.

The purpose of this paper was to begin to examine empirically the "equal exposure and vulnerability" assumption. Specifically, the paper used Hawkins, Catalano and Millers' widely cited 1992 article[79] on risk and protective factors for adolescent and young adult substance use as a framework within which to review past risk factor research and as a guide to identify risk factors to examine for race differences in exposure and/or vulnerability.

Based upon a review of the existing literature and an analysis of data from the Monitoring the Future study, the authors conclude that the simple assumption that African American and White youth are equally exposed and vulnerable to the same risk factors is not correct. They found that African American and White seniors differed significantly in their exposure to more than half of the 55 risk factors examined. Similarly, nearly one third of the 165 tests for race differences in vulnerability were highly significant (i.e., $p < .01$). While it is likely that some of the differences identified resulted from chance, their consistency across variables, within the same risk factor domain, and across drug categories makes unlikely the idea that the findings are primarily statistical artifacts.

Based upon the results of this study, the authors conclude that additional theoretically and empirically rigorous race-specific research is needed to better understand the etiology of substance use among African American adolescents. They believe that research is also needed to identify those risk factors that are most salient for African American adolescents and most amenable to change through well designed and, perhaps, culturally tailored preventive interventions.

Aims and Objectives of Monitoring the Future

Every few years the investigators on this study write a fair-sized description of the many aims and objectives of the study and provide a synopsis of progress that has been made on them. The latest such publication is an occasional paper in the MTF Occasional Paper series.[80] In addition, it contains a summary of the theoretical perspectives that have guided the design and development of the study over the years. As might be guessed, no one theory was considered sufficiently comprehensive to guide all of the effort; thus several perspectives have been used. This publication is available from the project in hard copy or may be downloaded from the study Web site at www.monitoringthefuture.org.

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[79] Hawkins, J. D., Catalano, R. F., & Miller, J. Y. (1992). Risk and protective factors for alcohol and other drug problems in adolescence and early adulthood: Implications for substance abuse prevention. *Psychological Bulletin, 112,* 64-105.

[80] Johnston, L. D., O'Malley, P. M., Schulenberg, J. E., & Bachman, J. G. (2001). *Aims and objectives of the Monitoring the Future study and progress toward fulfilling them as of 2001.* (Monitoring the Future Occasional Paper No. 52). Ann Arbor: Institute for Social Research.

Design and Procedures of the Study

Another publication that is periodically updated in the same Occasional Paper series is a more detailed description of the Monitoring the Future study design and the many field and other procedures that are used to implement that design. These descriptions go well beyond the level of detail contained in the current monographs. The latest one in this series was published in 2001.[81] Like Occasional Paper 52, it can be downloaded from the study's Web site (www.monitoringthefuture.org) or ordered from the study in hard copy form.

OTHER DATA ON CORRELATES AND TRENDS

Hundreds of correlates of drug use, without accompanying interpretation, may be found in the series of annual volumes from the study entitled *Monitoring the Future: Questionnaire Responses From the Nation's High School Seniors*.[82] For each year since 1975, a separate hardbound volume presents univariate and selected bivariate distributions on all questions contained in the study. A host of variables dealing explicitly with drugs—many of them not covered here—are contained in that series. Bivariate tables are provided for *all* questions each year distributed against an index of lifetime illicit drug involvement, making it possible to examine the relationships between hundreds of potential "risk factors" and drug use.

A special cross-time reference index is contained in each volume to facilitate locating the same question across different years. One can thus derive *trend* data on some 1,500 to 2,000 variables for the entire sample or for important subgroups (based on gender, race, region, college plans, and drug involvement). These volumes also can be helpful to analysts using the original MTF microdata in the Inter-University Consortium of Political and Social Research (ICPSR).

MONITORING THE FUTURE WEB SITE

Any reader wishing to get more information on the study, or to check for recent findings and publications, can reach the study's Web site at www.monitoringthefuture.org. Prior to publication in this monograph series, many of the latest findings on substance use trends and related attitudes and beliefs, are posted on the Web site. This usually occurs by mid-December of the year in which the data were gathered, immediately following their public release to the press.

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[81] Bachman, J. G., Johnston, L. D., & O'Malley, P. M. (2001). *The Monitoring the Future Project after twenty-seven years: Design and procedures.* (Monitoring the Future Occasional Paper No. 54). Ann Arbor: Institute for Social Research.

[82] This series is available from the Monitoring the Future study, Institute for Social Research, The University of Michigan, Ann Arbor, Michigan 48106-1248.

TABLE 10-1a

Nonprescription Diet Pills: Trends in Twelfth Graders' Lifetime, Annual, and Thirty-Day Prevalence of Use, by Gender[a]

(Entries are percentages)

Prevalence	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Lifetime																					
Total	29.6	31.4	29.7	28.7	26.6	25.5	21.5	19.9	17.7	17.2	15.0	14.8	14.9	15.6	16.0	16.6	15.7	17.1	16.6	17.1	+0.5
Males	16.5	17.4	14.8	14.8	13.1	12.4	9.4	9.1	7.8	5.9	6.4	5.6	4.5	6.1	5.5	8.1	6.4	6.5	7.2	8.3	+1.2
Females	42.2	44.8	43.1	41.5	39.7	38.3	32.6	30.2	28.3	28.1	23.2	23.3	23.7	23.9	25.5	24.5	25.7	26.5	26.4	23.6	-2.8
Annual																					
Total	20.5	20.5	18.8	16.9	15.3	13.9	12.2	10.9	10.4	8.8	8.4	8.0	9.3	9.8	9.3	9.8	9.6	10.2	11.1	11.8	+0.7
Males	10.7	10.6	9.2	9.0	6.9	6.4	4.9	4.3	4.3	3.0	4.3	3.2	2.5	3.5	3.7	4.9	4.3	4.0	4.9	6.2	+1.3
Females	29.5	30.0	27.5	24.4	23.2	21.1	18.8	17.2	16.7	14.2	12.2	12.3	14.9	15.1	14.1	14.6	15.4	15.7	17.2	15.6	-1.6
Thirty-Day																					
Total	9.8	9.5	9.9	7.3	6.5	5.8	5.1	4.8	4.3	3.7	4.0	3.8	4.2	3.8	4.3	4.6	4.8	5.4	5.8	6.3	+0.5
Males	5.0	4.0	4.8	3.7	3.2	2.7	1.8	2.3	1.9	1.4	1.9	1.9	1.3	1.1	2.3	2.3	2.2	2.6	2.1	3.7	+1.6
Females	14.0	13.7	14.2	10.7	9.6	8.9	8.3	7.0	6.7	5.5	5.8	4.9	6.4	5.7	5.8	7.0	7.6	7.8	9.4	8.0	-1.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data based on one form. The total N each year for 1982–89 is approximately 3,300. The total N each year for 1990–98 is approximately 2,600. Beginning in 1999, the total N each year is approximately 2,200.

TABLE 10-1b

Stay-Awake Pills: Trends in Twelfth Graders' Lifetime, Annual, and Thirty-Day Prevalence of Use, by Gender[a]

(Entries are percentages)

Prevalence	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Lifetime																					
Total	19.1	20.4	22.7	26.3	31.5	37.4	37.4	36.3	37.0	37.0	35.6	30.5	31.3	31.2	30.5	31.0	29.6	25.5	23.0	25.6	+2.6
Males	20.2	22.3	23.2	28.0	32.0	34.8	38.0	37.7	35.3	36.0	34.4	30.4	30.2	29.0	27.4	27.3	29.0	23.3	21.4	25.2	+3.8
Females	16.9	18.2	21.7	24.9	31.3	39.4	36.7	35.1	39.2	37.9	37.3	30.1	32.2	32.3	32.1	34.5	30.1	26.9	24.0	26.0	+2.0
Annual																					
Total	11.8	12.3	13.9	18.2	22.2	25.2	26.4	23.0	23.4	22.2	20.4	19.1	20.7	20.3	19.0	19.7	19.0	15.7	15.0	17.3	+2.3
Males	12.8	13.8	15.4	19.7	22.3	25.5	27.6	24.8	22.3	22.3	20.9	19.7	20.3	19.7	18.2	17.4	19.5	14.5	14.0	17.8	+3.8
Females	10.0	10.5	12.5	17.0	22.2	25.0	25.2	21.7	24.5	22.0	20.2	17.6	20.4	20.1	18.7	21.0	18.0	15.9	15.9	16.5	+0.6
Thirty-Day																					
Total	5.5	5.3	5.8	7.2	9.6	9.2	9.8	8.5	7.3	6.8	7.2	7.0	6.3	7.3	7.5	7.8	7.4	6.8	7.3	7.2	-0.1
Males	6.0	5.5	6.2	7.7	9.5	9.3	11.0	10.0	7.1	7.6	7.8	7.9	5.9	6.3	8.0	6.7	8.7	5.0	6.8	6.8	0.0
Females	4.7	4.5	5.5	6.7	9.3	9.1	8.6	6.9	7.3	5.5	6.5	5.5	5.8	7.1	6.1	8.2	5.8	7.4	7.3	7.3	0.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the Univesity of Michigan.

[a] Data based on one form. The total N each year for 1982–89 is approximately 3,300. The total N each year for 1990–98 is approximately 2,600. Beginning in 1999, the total N each year is approximately 2,200.

TABLE 10-1c

Look-Alikes: Trends in Twelfth Graders' Lifetime, Annual, and Thirty-Day Prevalence of Use, by Gender[a]

(Entries are percentages)

Prevalence	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Lifetime																					
Total	15.1	14.8	15.3	14.2	12.7	11.9	11.7	10.5	10.7	8.9	10.1	10.5	10.3	11.6	10.7	10.8	9.4	9.2	10.0	9.8	-0.2
Males	13.6	14.2	14.1	14.1	12.3	10.9	10.4	10.1	11.6	8.3	11.0	10.1	9.0	10.8	10.0	10.6	9.4	7.2	11.3	9.4	-1.9
Females	15.1	14.4	15.2	13.8	12.6	12.3	12.1	10.2	9.9	8.8	9.3	10.4	11.2	10.6	10.3	10.7	8.9	9.7	8.0	9.3	+1.3
Annual																					
Total	10.8	9.4	9.7	8.2	6.9	6.3	5.7	5.6	5.6	5.2	5.4	6.2	6.0	6.8	6.5	6.4	5.7	5.0	5.8	7.1	+1.3
Males	9.5	9.2	9.7	8.3	6.5	6.4	4.2	6.1	6.6	4.9	6.2	6.4	5.9	7.0	5.7	7.2	6.0	4.6	7.0	7.3	+0.3
Females	10.7	8.6	8.5	7.8	6.7	6.0	6.3	5.0	4.6	4.7	4.5	5.4	5.7	5.4	6.0	5.5	5.0	4.4	4.3	6.6	+2.3s
Thirty-Day																					
Total	5.6	5.2	4.4	3.6	3.4	2.7	2.7	2.4	2.3	2.1	2.4	2.7	2.4	3.0	3.1	2.7	2.7	2.4	2.6	3.3	+0.6
Males	4.0	4.5	4.5	3.8	3.4	2.4	1.7	2.3	2.6	2.0	2.5	2.0	2.5	3.0	2.6	2.7	3.1	1.9	3.1	3.0	-0.1
Females	5.2	5.4	3.8	3.1	3.0	2.7	3.0	2.2	1.8	1.8	2.2	2.9	2.0	2.1	2.7	2.6	2.0	2.0	1.7	2.8	+1.1

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Data based on one form. The total N each year for 1982–89 is approximately 3,300. The total N each year for 1990–98 is approximately 2,600. Beginning in 1999, the total N each year is approximately 2,200.

TABLE 10-2a

Nonprescription Diet Pills: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	*15400*	*14300*	*15400*	*15200*	*13600*	*12800*	*12800*	
Total	—	—	—	—	—	—	—	20.5	20.5	18.8	16.9	15.3	13.9	12.2	10.9	10.4	8.8	8.4	8.0	9.3	9.8	9.3	9.8	9.6	10.2	11.1	11.8	+0.7
Gender:																												
Male	—	—	—	—	—	—	—	10.7	10.6	9.2	9.0	6.9	6.4	4.9	4.3	4.3	3.0	4.3	3.2	2.5	3.5	3.7	4.9	4.3	4.0	4.9	6.2	+1.3
Female	—	—	—	—	—	—	—	29.6	30.0	27.5	24.4	23.2	21.1	18.8	17.2	16.7	14.2	12.2	12.3	15.0	15.1	14.1	14.6	15.4	15.7	17.2	15.6	-1.6
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	23.3	21.4	18.2	20.7	16.1	14.9	13.1	11.9	13.2	8.9	10.5	9.7	10.8	11.5	10.8	12.0	10.7	9.1	10.0	9.4	-0.6
Complete 4 years	—	—	—	—	—	—	—	17.5	19.0	18.8	14.7	15.0	13.3	11.7	10.9	9.7	8.6	8.0	7.3	9.3	9.3	8.6	9.2	10.1	10.4	11.5	11.6	+0.2
Region:																												
Northeast	—	—	—	—	—	—	—	19.1	18.5	18.4	16.5	14.9	14.3	10.5	10.4	11.5	5.7	6.3	7.6	8.6	8.2	10.1	8.1	8.6	8.6	8.0	12.8	+4.8s
North Central	—	—	—	—	—	—	—	24.6	23.3	20.2	19.2	16.6	15.0	13.7	15.0	11.1	10.7	9.3	8.4	11.8	11.8	9.5	10.2	10.4	10.4	12.6	15.5	+3.0
South	—	—	—	—	—	—	—	18.2	19.2	19.6	14.9	13.9	13.1	12.0	9.3	10.0	9.0	7.7	9.2	8.9	10.8	9.4	11.5	10.1	11.2	12.9	9.9	-3.0
West	—	—	—	—	—	—	—	18.9	21.1	15.8	17.3	16.4	13.5	12.1	8.7	8.9	8.8	10.3	5.4	7.4	6.3	7.9	7.8	8.6	9.3	9.3	8.6	-0.7
Population Density:																												
Large MSA	—	—	—	—	—	—	—	19.7	18.7	17.3	17.1	15.0	13.0	12.1	10.3	7.4	7.7	7.4	7.3	8.5	10.7	8.5	9.4	9.5	9.0	8.3	12.3	+3.9s
Other MSA	—	—	—	—	—	—	—	20.0	22.8	18.6	17.1	15.6	13.7	12.4	10.9	11.2	9.2	8.4	6.8	9.9	8.9	9.3	8.7	9.1	9.5	11.5	11.5	+0.1
Non-MSA	—	—	—	—	—	—	—	21.7	19.2	20.5	16.5	15.2	15.2	11.9	11.7	11.7	9.1	9.2	10.5	9.1	10.1	10.0	12.3	11.0	12.6	13.6	11.7	-1.9
Parental Education:[a]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	19.5	15.9	19.2	14.6	12.0	13.5	13.4	9.5	5.1	9.4	10.6	6.9	11.0	8.9	8.3	14.4	11.8	9.9	9.8	5.6	-4.2
2.5-3.0	—	—	—	—	—	—	—	21.6	21.3	18.2	17.8	15.6	13.1	12.0	9.9	12.3	8.6	8.9	8.9	11.0	10.9	8.5	10.5	8.9	11.1	13.1	15.0	+2.0
3.5-4.0	—	—	—	—	—	—	—	20.6	20.2	20.6	18.0	16.6	14.5	11.5	11.8	9.2	8.2	7.9	7.8	10.6	11.5	9.7	8.8	9.9	10.5	11.6	14.1	+2.5
4.5-5.0	—	—	—	—	—	—	—	19.3	22.4	17.4	16.8	15.0	15.9	12.0	10.4	12.0	9.3	6.6	8.0	8.5	7.5	8.8	10.7	11.6	11.2	12.7	9.0	-3.8s
5.5-6.0 (High)	—	—	—	—	—	—	—	21.0	22.3	19.1	17.1	15.7	11.6	13.6	13.4	12.2	8.5	8.2	6.2	5.3	9.2	8.4	9.4	9.6	7.4	7.4	7.9	+0.5
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	23.2	22.2	20.4	18.4	16.3	14.7	13.4	12.5	11.0	9.8	9.2	9.7	10.9	10.9	10.8	11.2	11.2	11.8	12.9	+1.1
Black	—	—	—	—	—	—	—	—	6.6	8.1	6.4	5.5	7.5	6.9	4.3	2.9	3.5	3.0	4.5	6.1	5.3	4.3	5.3	4.9	4.2	5.5	6.5	+1.1
Hispanic	—	—	—	—	—	—	—	—	11.6	12.6	14.8	10.8	7.8	7.9	9.6	9.8	5.6	4.6	7.1	7.1	7.[illegible]	7.0	8.2	9.3	9.8	10.0	9.1	-0.9

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.
Data based on one of five forms in 1982–89; N is one-fifth of N indicated. Beginning in 1990, data based on one of six forms; N is one-sixth of N indicated.

[a] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data were allowed on one of the two variables.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE 10-2b

Stay-Awake Pills: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	*15400*	*14300*	*15400*	*15200*	*13600*	*12800*	*12800*	
Total	—	—	—	—	—	—	—	11.8	12.3	13.9	18.2	22.3	25.2	26.4	23.0	23.4	22.2	20.4	19.2	20.7	20.3	19.0	19.7	19.0	15.7	15.0	17.3	+2.3
Gender:																												
Male	—	—	—	—	—	—	—	12.8	13.8	15.4	19.7	22.3	25.5	27.6	24.8	22.3	22.3	20.9	19.7	20.3	19.7	18.2	17.4	19.5	14.5	14.0	17.8	+3.8
Female	—	—	—	—	—	—	—	10.0	10.5	12.5	17.0	22.2	25.0	25.2	21.7	24.5	22.0	20.2	17.6	20.4	20.1	18.7	21.0	18.0	15.9	15.9	16.5	+0.6
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	11.4	10.8	12.5	15.5	18.1	23.1	23.3	21.8	22.9	21.0	20.5	19.6	20.1	21.1	18.2	21.8	18.5	14.3	15.5	18.9	+3.4
Complete 4 years	—	—	—	—	—	—	—	10.5	12.6	14.0	20.4	24.9	26.5	27.5	24.1	24.1	22.3	21.0	18.7	20.6	19.7	18.3	19.1	18.4	15.1	14.7	16.5	+1.8
Region:																												
Northeast	—	—	—	—	—	—	—	9.6	9.5	11.9	18.2	20.4	26.4	23.8	18.4	22.0	18.3	18.2	20.2	21.2	18.4	22.5	19.1	17.6	16.0	10.2	14.7	+4.5
North Central	—	—	—	—	—	—	—	15.1	16.8	16.3	18.4	24.5	26.8	27.5	29.1	28.4	31.8	25.7	22.0	26.2	24.2	19.8	23.8	22.0	17.3	19.3	24.4	+5.1
South	—	—	—	—	—	—	—	9.6	10.7	12.0	13.3	19.8	20.9	25.6	20.4	20.6	16.1	17.6	18.7	20.2	18.8	17.5	20.1	18.8	15.6	13.8	15.4	+1.6
West	—	—	—	—	—	—	—	13.5	11.5	16.0	25.6	25.5	28.9	28.9	24.0	22.9	23.4	20.0	14.9	13.7	19.1	16.5	13.3	16.8	13.3	16.3	12.4	-4.0
Population Density:																												
Large MSA	—	—	—	—	—	—	—	11.5	11.1	12.2	17.7	19.0	25.6	23.2	20.9	19.0	16.7	15.2	16.7	18.4	18.9	14.4	15.5	15.3	9.6	11.0	15.7	+4.7
Other MSA	—	—	—	—	—	—	—	12.4	14.5	14.0	19.1	24.1	24.1	27.7	22.9	25.1	25.3	21.2	19.8	21.1	19.3	20.2	18.4	21.1	18.4	15.2	14.3	-0.9
Non-MSA	—	—	—	—	—	—	—	11.3	10.5	15.4	17.4	22.1	27.0	27.4	25.2	24.5	21.7	23.4	19.9	22.3	23.6	20.7	26.8	18.9	17.3	19.3	24.3	+5.0
Parental Education:[a] (Low)																												
1.0-2.0	—	—	—	—	—	—	—	8.8	8.2	8.3	10.9	12.0	15.0	17.1	18.1	15.3	14.9	16.2	11.0	16.6	13.2	11.5	18.2	11.7	7.9	7.3	15.3	+8.0
2.5-3.0	—	—	—	—	—	—	—	10.6	10.1	13.9	15.5	19.5	22.8	22.5	21.6	23.2	20.2	22.8	19.0	18.1	18.1	19.0	21.0	16.5	13.4	15.1	17.1	+2.0
3.5-4.0	—	—	—	—	—	—	—	12.6	13.5	13.5	21.3	26.5	30.0	28.4	26.0	25.6	23.9	22.4	18.6	21.6	24.3	17.4	17.6	19.9	18.3	17.0	20.3	+3.3
4.5-5.0	—	—	—	—	—	—	—	13.2	15.3	16.1	24.0	23.7	29.9	30.3	24.0	28.0	25.1	20.0	21.1	24.4	20.4	23.2	20.2	20.3	15.6	16.7	16.2	-0.5
5.5-6.0 (High)	—	—	—	—	—	—	—	13.0	16.7	18.0	20.2	28.7	24.9	32.3	25.1	22.3	25.8	17.8	20.2	18.4	17.3	17.4	19.3	22.6	14.9	13.4	13.6	+0.1
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	13.6	15.0	18.7	23.7	27.7	30.4	29.8	27.7	27.4	25.8	24.0	23.7	23.9	23.3	23.1	23.2	20.7	18.2	19.9	+1.7
Black	—	—	—	—	—	—	—	—	2.0	3.0	3.6	4.4	5.5	6.2	6.0	6.4	5.1	3.5	3.5	3.6	4.8	4.4	5.3	6.2	3.6	3.0	4.2	+1.3
Hispanic	—	—	—	—	—	—	—	—	5.7	8.3	8.4	9.7	13.8	15.6	16.5	14.1	11.6	11.9	13.3	14.2	12.3	9.5	9.6	10.1	12.3	11.8	10.6	-1.2

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.
Data based on one of five forms in 1982–89; N is one-fifth of N indicated. Beginning in 1990, data based on one of six forms; N is one-sixth of N indicated.

[a] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data were allowed on one of the two variables.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE 10-2c

Look-Alikes: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	*15400*	*14300*	*15400*	*15200*	*13600*	*12800*	*12800*	
Total	—	—	—	—	—	—	—	10.8	9.4	9.7	8.2	6.9	6.3	5.7	5.6	5.6	5.2	5.4	6.2	6.0	6.8	6.5	6.4	5.7	5.0	5.8	7.1	+1.3
Gender:																												
Male	—	—	—	—	—	—	—	9.5	9.2	9.7	8.3	6.5	6.4	4.2	6.1	6.6	4.9	6.2	6.4	5.9	7.0	5.7	7.2	6.0	4.6	7.0	7.3	+0.3
Female	—	—	—	—	—	—	—	10.7	8.7	8.5	7.8	6.7	6.0	6.3	5.0	4.6	4.7	4.5	5.5	5.7	5.4	6.0	5.5	5.0	4.4	4.3	6.6	+2.3s
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	13.6	11.9	11.2	10.0	10.0	8.1	7.0	8.0	7.9	7.2	4.4	7.6	7.0	7.5	7.0	10.1	6.2	5.2	8.4	9.9	+1.5
Complete 4 years	—	—	—	—	—	—	—	7.1	6.1	7.0	6.5	4.8	4.9	3.8	4.6	4.4	3.9	5.4	5.5	5.7	6.2	5.5	4.9	4.8	4.4	4.9	5.7	+0.8
Region:																												
Northeast	—	—	—	—	—	—	—	9.3	9.0	10.7	9.0	7.4	4.6	4.9	4.0	3.8	4.4	4.9	4.4	4.6	5.6	6.3	5.6	6.5	5.1	5.3	7.5	+2.2
North Central	—	—	—	—	—	—	—	14.5	12.3	10.9	9.0	7.6	7.6	7.3	8.5	7.3	8.2	7.1	8.4	8.7	8.5	7.9	7.7	6.2	4.8	6.8	8.4	+1.6
South	—	—	—	—	—	—	—	9.8	7.7	9.0	7.3	5.6	6.1	5.5	4.7	6.0	4.5	4.7	6.2	5.1	5.8	5.6	6.7	5.0	6.7	6.2	6.7	+0.5
West	—	—	—	—	—	—	—	7.4	7.9	7.6	7.7	7.7	6.9	4.7	4.6	4.4	3.1	4.4	4.6	5.0	7.3	6.3	5.1	6.0	1.9	4.7	5.8	+1.1
Population Density:																												
Large MSA	—	—	—	—	—	—	—	10.2	9.5	10.2	6.1	7.1	4.4	4.3	3.3	3.0	3.3	3.0	4.7	5.3	7.2	5.4	4.5	6.1	3.0	3.7	6.8	+3.0s
Other MSA	—	—	—	—	—	—	—	10.8	10.0	9.4	9.2	6.3	6.4	6.4	5.9	6.0	6.0	4.7	7.3	6.0	6.0	5.4	4.8	6.2	5.7	6.2	6.2	0.0
Non-MSA	—	—	—	—	—	—	—	11.2	8.4	9.6	8.6	7.8	8.2	5.9	7.2	7.3	5.4	8.7	5.5	6.7	7.6	9.2	11.7	4.3	5.9	7.6	9.4	+1.7
Parental Education:[a]																												
(Low)																												
1.0-2.0	—	—	—	—	—	—	—	9.8	7.2	9.9	9.0	6.1	5.7	6.3	4.6	3.1	6.6	4.3	4.9	8.2	6.5	3.2	7.0	3.3	4.7	5.7	5.2	-0.4
2.5-3.0	—	—	—	—	—	—	—	11.4	9.8	9.9	8.3	6.9	6.9	5.2	5.7	6.3	5.1	5.3	7.5	6.5	5.3	6.7	7.1	5.5	7.3	5.7	8.2	+2.5
3.5-4.0	—	—	—	—	—	—	—	10.3	9.5	9.6	8.8	8.0	6.3	5.7	5.9	5.9	5.1	6.6	6.5	4.4	9.5	5.4	7.4	5.0	3.4	5.2	6.8	+1.7
4.5-5.0	—	—	—	—	—	—	—	10.4	8.3	6.1	5.9	5.9	6.7	4.5	5.4	5.9	4.7	4.0	5.6	7.1	4.9	6.7	5.8	6.2	5.0	7.5	7.2	-0.3
5.5-6.0	—	—	—	—	—	—	—	6.9	6.7	8.1	7.9	4.3	4.6	4.3	5.3	4.7	2.5	5.4	3.0	4.0	4.3	6.3	2.8	6.1	3.1	5.5	4.5	-1.0
(High)																												
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	10.9	10.3	9.8	8.3	7.1	6.3	6.1	6.4	6.2	6.1	6.6	7.0	7.2	7.1	7.6	7.4	6.0	5.9	7.0	+1.1
Black	—	—	—	—	—	—	—	—	2.0	2.4	2.4	2.2	2.7	2.7	2.6	2.1	1.5	1.7	1.6	1.4	1.9	1.4	0.9	0.9	1.0	1.2	1.9	+0.8
Hispanic	—	—	—	—	—	—	—	—	6.1	7.0	5.8	3.8	3.0	3.2	3.5	3.4	2.2	1.6	5.3	5.8	3.6	3.9	3.6	3.4	3.4	4.6	7.1	+2.5

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.
Data based on one of five forms in 1982–89; N is one-fifth of N indicated. Beginning in 1990, data based on one of six forms; N is one-sixth of N indicated.

[a] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data were allowed on one of the two variables.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE 10-3

Percentage of Twelfth Graders in Each Category of an Illicit Drug Use Index Who Have Tried Various Over-the-Counter Stimulants, 2001

(Entries are percentages)

	Lifetime Illicit Drug Use Groupings		
Their lifetime use of . . .	No Use	Used Marijuana Only	Used Other Illicit Drugs
Diet pills	8.6[a]	14.8	36.8
Stay-awake pills	11.4	28.2	54.1
Look-alikes	2.1	7.0	26.8
Approx. N =	*930*	*470*	*520*

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] This means that, of those who have never used an illicit drug, 8.6 percent have used a diet pill at least once.

TABLE 10-4

Daily Marijuana Use: Responses to Selected Questions by Subgroups, Twelfth Graders, 2001

	Total	Gender		4-Year College Plans		Region				Population Density		
		Male	Female	No	Yes	North East	North Central	South	West	Large MSA	Other MSA	Non-MSA
Q. *Thinking back over your whole life, has there ever been a period when you used marijuana or hashish on a daily, or almost daily, basis for at least a month?*												
No	82.0	79.7	86.2	77.2	86.2	76.6	81.6	87.4	78.8	80.3	82.5	82.9
Yes	18.0	20.3	13.8	22.8	13.8	23.4	18.4	12.7	21.2	19.7	17.5	17.1
Q. *How old were you when you first smoked marijuana or hashish that frequently?*												
Grade 6 or earlier	1.6	1.7	1.1	1.3	1.3	1.8	1.4	1.2	2.3	2.5	1.3	1.0
Grade 7 or 8	5.5	6.1	4.1	8.5	4.1	5.4	5.0	5.1	7.4	6.3	5.9	3.9
Grade 9 (Freshman)	4.3	4.1	4.1	5.3	3.1	6.6	3.5	2.9	5.6	3.9	4.6	4.3
Grade 10 (Sophomore)	3.5	4.9	2.1	5.4	2.6	5.2	4.4	1.8	3.3	3.5	3.2	4.1
Grade 11 (Junior)	2.4	2.8	1.9	1.3	2.3	3.6	3.2	1.2	2.1	2.7	1.9	3.1
Grade 12 (Senior)	0.7	0.8	0.5	1.1	0.4	0.7	0.9	0.5	0.6	0.7	0.6	0.7
Never used daily	82.0	79.7	86.2	77.2	86.2	76.6	81.6	87.4	78.8	80.3	82.5	82.9
Q. *How recently did you use marijuana or hashish on a daily, or almost daily, basis for at least a month?*												
During the past month	5.4	7.1	3.0	8.3	3.1	7.7	4.4	4.7	5.9	5.5	5.5	5.2
2 months ago	1.6	1.1	2.0	2.2	1.3	1.4	1.9	1.7	1.2	1.5	1.6	1.7
3 to 9 months ago	2.3	3.0	1.4	1.7	2.5	2.5	2.4	1.0	4.0	2.4	2.1	2.4
About 1 year ago	2.5	2.6	2.5	2.1	2.4	3.0	2.7	2.2	2.2	3.1	1.7	3.1
About 2 years ago	3.2	3.6	2.4	4.3	2.6	6.0	3.6	0.9	3.8	3.4	3.4	2.6
3 or more years ago	3.1	2.9	2.5	4.1	1.9	2.7	3.4	2.2	4.2	3.8	3.2	2.0
Never used daily	82.0	79.7	86.2	77.2	86.2	76.6	81.6	87.4	78.8	80.3	82.5	82.9
Q. *Over your whole lifetime, during how many months have you used marijuana or hashish on a daily or near-daily basis?*												
Less than 3 months	4.2	5.5	2.7	5.9	3.3	4.6	4.1	3.2	5.8	4.7	4.0	4.1
3 to 9 months	3.6	3.9	3.0	2.6	3.5	5.3	3.4	2.6	4.1	3.7	4.3	2.4
About 1 year	3.1	3.4	2.3	3.7	2.1	5.1	3.5	2.2	2.1	3.6	2.7	3.2
About 1 and 1/2 years	1.9	1.7	2.1	2.7	1.2	3.4	1.2	1.2	3.0	2.3	1.7	1.9
About 2 years	2.4	2.7	2.3	4.2	1.9	2.0	4.2	1.1	2.1	3.1	2.2	2.0
About 3 to 5 years	1.9	1.6	1.3	2.4	1.2	2.0	1.8	1.7	2.3	1.5	1.5	2.9
6 or more years	0.8	1.4	0.0	1.2	0.5	0.9	0.3	0.7	1.8	0.7	1.0	0.7
Never used daily	82.0	79.7	86.2	77.2	86.2	76.6	81.6	87.4	78.8	80.3	82.5	82.9
Approx. N =	*2,100*	*890*	*1,100*	*410*	*1,500*	*390*	*600*	*680*	*420*	*610*	*950*	*530*

NOTE: Entries are percentages that sum vertically to 100 percent.
SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE 10-5a

Trends in Daily Use of Marijuana in Lifetime by Subgroups, Twelfth Graders[a]

	Percentage ever using daily for at least a month																				
	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
All seniors	20.5	16.8	16.3	15.6	14.9	14.7	12.8	11.5	10.0	9.0	8.4	9.6	11.3	12.1	15.7	18.8	18.0	17.9	17.0	18.0	+1.0
Gender:																					
Male	20.1	18.1	17.2	17.7	16.6	16.2	14.8	12.7	10.6	10.5	8.3	10.7	13.3	12.9	18.7	19.7	19.5	18.5	18.8	20.3	+1.5
Female	18.0	13.5	12.9	12.0	11.6	12.2	9.6	9.7	7.9	6.4	7.5	7.2	8.5	7.9	10.7	15.2	13.9	14.4	13.7	13.8	+0.1
College Plans:																					
None or under 4 yrs.	22.5	20.3	18.9	19.6	17.2	18.0	14.5	15.3	12.8	11.5	11.2	11.6	16.1	14.2	21.5	22.6	22.1	22.1	19.1	22.8	+3.6
Complete 4 yrs.	13.8	10.5	10.7	10.6	11.0	11.1	9.8	9.1	7.4	6.5	5.9	7.7	8.6	9.2	11.9	14.9	13.4	14.2	13.7	13.8	+0.1
Region:																					
Northeast	25.1	20.4	24.1	20.9	21.5	17.0	13.1	14.6	10.4	10.3	8.7	12.0	12.2	12.8	21.3	24.6	22.7	17.9	19.8	23.4	+3.7
North Central	21.1	15.9	12.8	16.3	11.3	12.7	10.3	13.4	10.8	8.4	8.0	9.3	11.0	13.6	14.6	16.5	16.1	14.3	13.8	18.4	+4.6
South	15.7	12.7	14.0	8.9	11.3	11.9	10.9	8.1	8.7	7.4	5.9	8.3	11.8	11.2	12.7	14.9	15.6	19.1	14.7	12.7	-2.0
West	20.8	21.4	17.6	18.5	18.3	19.7	19.0	12.3	11.0	11.3	13.4	10.4	10.2	10.6	17.0	23.0	20.6	20.4	21.9	21.2	-0.6
Population Density:																					
Large MSA	23.8	20.0	19.4	18.1	17.0	16.7	14.0	10.6	8.3	7.2	8.4	8.6	10.3	13.9	15.3	18.8	18.0	16.3	18.4	19.7	+1.3
Other MSA	20.3	18.2	16.6	16.0	14.9	15.0	14.9	12.4	11.7	11.1	8.9	10.2	13.6	11.3	18.2	20.1	19.7	19.2	18.3	17.5	-0.8
Non-MSA	17.9	12.6	13.2	12.8	13.2	12.2	7.6	10.4	8.2	7.1	7.6	9.6	8.4	11.2	11.6	16.2	14.4	17.1	13.0	17.1	+4.1

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Data based on one form. The total N each year for 1982–89 is approximately 3,300. The total N each year for 1990–98 is approximately 2,600. Beginning in 1999, the total N each year is approximately 2,200.

TABLE 10-5b

Trends in Daily Use of Marijuana Prior to Tenth Grade by Subgroups, Twelfth Graders[a]

	Percentage reporting first such use prior to tenth grade																				
	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
All seniors	13.1	11.1	10.9	8.8	8.5	8.9	7.8	7.6	6.7	6.4	5.6	5.2	5.5	5.5	7.8	9.7	10.1	10.7	10.8	11.4	+0.6
Gender:																					
Male	12.9	12.1	11.8	9.8	8.7	10.2	8.4	8.4	6.9	7.4	5.6	5.5	6.1	5.8	9.6	9.6	11.4	10.0	10.9	11.9	+1.0
Female	11.5	8.3	8.0	6.5	6.6	7.1	6.6	6.0	4.9	4.4	5.0	4.1	4.4	3.4	4.9	8.1	8.0	8.8	9.0	9.3	+0.4
College Plans:																					
None or under 4 yrs.	14.2	13.5	12.3	11.8	10.7	11.4	11.0	11.6	9.0	8.7	7.8	6.3	6.7	6.7	11.0	11.0	16.9	12.2	12.7	15.1	+2.4
Complete 4 yrs.	8.2	6.5	6.6	5.5	5.2	6.4	5.3	5.1	4.6	4.3	3.8	4.2	4.4	4.2	5.8	7.9	7.1	8.1	7.9	8.5	+0.6
Region:																					
Northeast	17.3	11.9	17.2	12.9	10.3	10.3	9.0	10.7	6.5	8.2	4.8	6.3	5.2	6.6	8.3	13.3	12.7	8.8	13.2	13.8	+0.7
North Central	13.3	12.4	8.4	9.1	7.3	7.7	6.0	7.6	6.7	4.9	4.7	5.5	5.8	6.2	8.9	8.2	9.6	7.8	8.3	9.9	+1.6
South	9.3	8.3	8.5	5.0	6.4	7.4	6.3	5.4	6.2	5.1	4.4	4.3	6.6	4.5	5.8	7.5	8.0	13.2	8.8	9.2	+0.3
West	12.6	13.9	12.1	8.9	11.2	11.7	11.9	8.1	8.0	8.6	9.8	5.1	3.2	5.0	10.1	12.3	12.1	11.6	14.6	15.3	+0.7
Population Density:																					
Large MSA	15.6	13.7	12.4	12.0	9.6	11.8	8.1	6.0	5.9	5.4	5.7	5.5	4.6	6.0	9.2	10.0	9.3	9.7	12.2	12.7	+0.5
Other MSA	12.5	12.0	11.5	8.3	8.4	8.8	9.6	8.1	8.1	7.7	5.8	5.3	6.9	5.5	8.3	9.8	11.4	11.4	12.0	11.8	-0.1
Non-MSA	11.7	8.2	8.5	6.6	7.6	6.4	4.3	7.6	4.3	5.3	5.3	4.8	4.2	4.8	5.6	9.4	8.6	10.8	7.2	9.2	+2.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Data based on one form. The total N each year for 1982–89 is approximately 3,300. The total N each year for 1990–98 is approximately 2,600. Beginning in 1999, the total N each year is approximately 2,200.

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TABLE 10-6

Annual Prevalence of Use of Androstenedione and Creatine by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

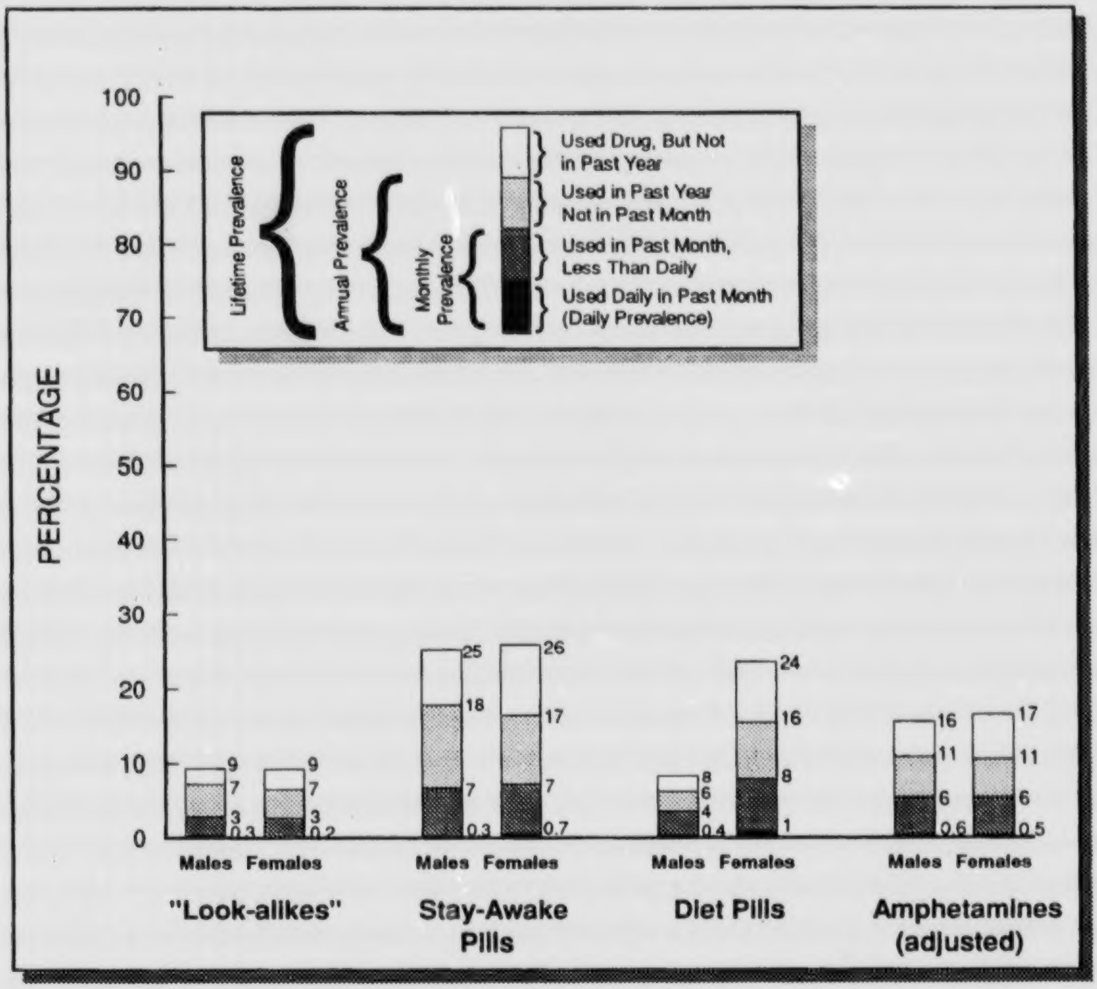
	Approx. N			Androstenedione			Creatine		
Grade:	8th	10th	12th	8th	10th	12th	8th	10th	12th
Total	*5,400*	*4,700*	*4,300*	1.1	2.2	3.0	2.7	7.9	11.7
Gender:									
Male	*2,500*	*2,200*	*1,900*	1.3	3.5	5.3	4.8	14.7	22.1
Female	*2,800*	*2,400*	*2,200*	1.0	0.9	0.7	0.9	1.7	2.0
College Plans:									
None or under 4 yrs.	*530*	*630*	*830*	4.2	3.9	4.3	6.0	10.3	11.7
Complete 4 yrs.	*4,700*	*4,000*	*3,200*	0.8	1.9	2.5	2.4	7.5	11.4
Region:									
Northeast	*1,000*	*900*	*800*	0.6	2.1	3.1	1.4	5.4	10.9
North Central	*1,300*	*1,400*	*1,200*	1.1	1.7	3.4	3.4	6.6	12.4
South	*2,000*	*1,700*	*1,400*	1.6	2.8	2.8	3.8	10.8	11.4
West	*1,100*	*700*	*900*	0.8	1.9	2.9	1.2	7.2	11.8
Population Density:									
Large MSA	*1,600*	*1,300*	*1,300*	1.1	2.6	3.0	2.3	6.6	10.2
Other MSA	*2,500*	*2,300*	*1,900*	1.2	1.9	3.3	2.8	8.1	12.5
Non-MSA	*1,300*	*1,100*	*1,100*	0.9	2.4	2.7	3.0	9.1	11.9
Parental Education:[a]									
1.0-2.0 (Low)	*430*	*400*	*330*	1.3	3.6	1.5	3.7	5.6	8.0
2.5-3.0	*1,100*	*1,100*	*970*	0.8	1.7	3.7	1.8	8.1	11.8
3.5-4.0	*1,300*	*1,200*	*1,200*	1.6	3.4	2.9	3.5	10.2	13.0
4.5-5.0	*1,300*	*1,100*	*1,100*	1.0	1.7	3.2	2.8	7.1	11.7
5.5-6.0 (High)	*700*	*600*	*530*	1.2	1.4	1.9	3.1	7.1	11.7

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

FIGURE 10-1

Prevalence and Recency of Use, by Gender
Amphetamines and Nonprescription Stimulants
Twelfth Graders, 2001



Appendix A

PREVALENCE AND TREND ESTIMATES ADJUSTED FOR ABSENTEES AND DROPOUTS

It is reasonable to ask whether the prevalence and trend estimates derived from twelfth graders are an accurate reflection of the reality that pertains to all young people who would be in the same class or age cohort, *including* those who have dropped out of school by senior year. Because this question was raised in the first decade of the study, in 1985 we published an extensive chapter addressing this question in a volume in the NIDA Research Monograph series.[83] In the years since, we have continued to estimate the degree to which the results presented in the present monograph series, based on high school seniors only, accurately represent the entire class cohort. In this Appendix we summarize the main points relevant to this issue of sample coverage.

First, it should be noted that two segments of the entire class/age cohort are missing from the data collected each year from seniors: (1) those who are still enrolled in school but who are absent the day of data collection (the "absentees") and (2) those who have left school and will not complete high school (the "dropouts"). The absentees constitute virtually all of the nonrespondents shown in the response rate given in Table 3-1 in Chapter 3 of this volume (since refusal rates are negligible) or about 18% of all seniors (or 14% of the class/age cohort). Based on our review of available Census data, dropouts account for approximately 15% of the class/age cohort.

The methods we used to estimate the prevalence rates for these two missing segments are summarized briefly here. Then, the effects of adding in these two segments to the calculation of the overall prevalence rates for two important classes of drugs are presented, along with the impact on the trend estimates. Two illicit drugs have been chosen for illustrative purposes: marijuana, the most prevalent of the illicit drugs, and cocaine, one of the more dangerous and less prevalent drugs. Estimates for high school seniors are presented for both lifetime and 30-day prevalence for each drug.

CORRECTIONS FOR LOWER GRADE LEVELS

Before estimates of corrections for seniors are discussed, it should be noted that the twelfth grade represents the "worst case" in terms of underestimation. Rates of both dropping out and absenteeism are lower for eighth and tenth grades than for twelfth grade. With respect to dropping out, only a very few members of an age cohort have ceased attending school by grade 8, when most are age 13 or 14. In fact, Census data suggest that less than 1% would have dropped out at this stage. Most tenth graders are aged 15 or 16, and Census data indicate that only a small proportion of them (less than 5%) would have dropped out by then.[84] Thus, any correction for the missing dropouts should be negligible at eighth grade and quite small at tenth grade.

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[83] Johnston, L. D., & O'Malley, P. M. (1985). Issues of validity and population coverage in student surveys of drug use. In B. A. Rouse, N. J. Casual, & L. G. Richards (Eds.), *Self-report methods of estimating drug use: Meeting current challenges to validity* (NIDA Research Monograph No. 57 (ADM) 85-1402). Washington, DC: U.S. Government Printing Office.

Regarding absentees, Table 3-1, presented earlier, shows that while absentees comprise 18% of the twelfth graders who should be in school, they comprise only 12% of tenth graders and 10% of eighth graders in 2001. Thus, the eighth- and tenth-grade change in prevalence estimates that would result from corrections for this missing segment also would be considerably less than for twelfth graders.

In sum, the modest corrections in estimates in substance use rates, which we will show next to result from the corrections for dropouts and absentees at the twelfth-grade level, set outer limits for what would be found at eighth and tenth grade. In fact, it is clear that the corrections would be considerably smaller at tenth grade and far smaller at eighth grade. Since the corrections described for twelfth graders turn out to be modest ones, we have not undertaken comparable corrections for eighth and tenth graders.

THE EFFECTS OF MISSING ABSENTEES

To be able to assess the effects of excluding absentees on the estimates of twelfth-grade drug use, we included a question that asks students how many days of school they had missed in the previous four weeks. Using this variable, we can place individuals into different strata as a function of how often they tend to be absent from school. For example, all students who had been absent 50% of the time could form one stratum. Assuming that absence on the particular day of the administration is a fairly random event, we can use the actual survey participants in this stratum to represent all students in their stratum, including the ones who happen to be absent that particular day. By giving them a double weight, they can be used to represent both themselves and the other 50% of their stratum who were absent that day. Those who say they were in school only one-third of the time would get a weight of three to represent themselves plus the two-thirds in their stratum who were not there, and so forth. Using this method, we found that absentees as a group have appreciably higher than average usage levels for all licit and illicit drugs. *However, looking at 1983 data, we found that the omission of absentees did not depress any of the prevalence estimates in any of the drugs by more than 2.7 percentage points, because they represent such a small proportion of the total target sample.* Considering that a substantial proportion of those who are absent likely are absent for reasons unrelated to drug use—such as illness and participation in extracurricular activities—it may be surprising to see even these differences. In any case, from the point of view of policy or public perceptions, the small "corrections" would appear to be of little or no significance. (The correction in 1983 across all 13 drugs in lifetime prevalence averaged only 1.4 percentage points.) Further, such corrections should have virtually no effect on cross-time trend estimates unless the rate of absenteeism was changing appreciably; and we find no evidence in our data that it has. Put another way, the presence of a slight underestimate that is constant across time should not influence trend results. Should absentee rates start changing substantially, then it might be argued that such corrections should be presented routinely.

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[84] According to the *Statistical Abstract of the United States 1998 (p. 168)*, in 1996 the proportion of the civilian non-institutionalized population of the United States enrolled in school is 97.7% among 7–13-year-olds and 98.0% among 14–15-year-olds. It drops to 92.8% for 16–17-year-olds combined, but there is probably a considerable difference between age 16 and age 17 because state laws often require attendance through age 16. Eighth graders in the spring of the school year are mostly (and about equally) 13 and 14 years old; while tenth graders are mostly (and about equally) 15 and 16 years old. These data, then, would suggest that dropouts are no more than 0.8% of eighth graders and 4.0% of tenth graders. U.S. Department of Commerce. (1998). *Statistical Abstract of the United States 1998: The National Data Book.* (118th ed.). Washington, D.C.: Bureau of the Census.

THE EFFECTS OF MISSING DROPOUTS

Unfortunately, we cannot derive corrections from data gathered from seniors to impute directly the prevalence rates for dropouts, as we did for absentees, since we have no completely appropriate stratum from which we have sampled. We believe, based on our own previous research as well as the work of others, that dropouts generally have prevalence rates for all classes of drugs substantially higher than the in-school students. In fact, the dropouts may be fairly similar to the absentees.

We have consistently estimated the proportion who fail to complete high school to be approximately 15%; Figure A-1 displays the high school completion rate for the years 1972 through 2000 based on Census data. As the figure indicates, completion rates (and the complement, dropout rates) have been quite constant over this interval for persons 20-24 years old.[85] (Younger age brackets are less appropriate to use because they include some young people who are still enrolled in high school.) Monitoring the Future probably covers some small proportion of the 15%, since the survey of seniors takes place a few months *before* graduation, and not everyone will graduate. On the other hand, perhaps 1% to 2% of the age group which Census shows as having a diploma get it through a General Equivalency Degree and thus would not be covered in Monitoring the Future. (Elliott and Voss reported this result for less than 2% of their sample in their follow-up study of 2617 ninth graders in California who were followed through their high school years.[86]) So these two factors probably cancel each other out. Thus, we use 15% as our estimate of the proportion of a class cohort not covered.

Extrapolating to Dropouts from Absentees

To estimate the drug usage prevalence rates for this group, we have used two quite different approaches. The first was based on extrapolations from seniors participating in this study. Using this method, we developed estimates under three different assumptions: that the difference between dropouts and the participating seniors in the study was equivalent to (a) the difference between absentees and the participating seniors, (b) one and one-half times that difference, and (c) twice that difference. The last assumption we would consider a rather extreme one.

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[85] U.S. Bureau of the Census (various years). *Current population reports, Series P-20*, various numbers. Washington, DC: U.S. Government Printing Office.

[86] Elliott, D., & Voss, H. L. (1974). *Delinquency and dropout.* Lexington, MA: D.C. Heath-Lexington Books.

The second general method involved using the best national data then available on drug use among dropouts—namely the National Household Surveys on Drug Abuse (NHSDA).[87] While these surveys have rather small samples of dropouts in the relevant age range in any given year, they at least should provide unbiased estimates for dropouts still in the household population.

Using the first assumption—that dropouts are just like absentees—we found that no prevalence rate was changed by more than 5 percentage points over the estimate based on 1983 seniors only, even with the simultaneous correction for both absentees and dropouts. (The method for calculating prevalence rates for the absentees is the one described in the previous section.) The largest correction in 1983 involved marijuana, with lifetime prevalence rising from just under 60% to 64%. Even under the most extreme assumption—which results in exceptionally high prevalence rates for dropouts on all drugs, for example 90% lifetime prevalence for marijuana—the overall correction in any of the prevalence figures for any drug remained less than 7.5 percentage points. Again, marijuana showed the biggest correction (7.5% in annual prevalence, raising it from 46% uncorrected to 54% with corrections for both absentees and dropouts). As we would have expected, the biggest *proportional* change occurred for heroin, since it represents the most deviant end of the drug-using spectrum and thus usually would be most associated with truancy and dropping out.

Extrapolating from the Household Surveys

The second method of estimating drug use among dropouts was by comparing the household survey data on dropouts with the data from those remaining in school. We originally conducted secondary analyses of the archived data from the 1977 and 1979 National Household Surveys (NHSDA). (Analyses using more recent NHSDA data are shown in the next section.) Analyses were restricted to the age range 17 to 19 years old, since about 95% of the Monitoring the Future seniors fall in this range. Of course, the number of cases is small. The 1977 NHSDA survey included only 46 dropouts and 175 enrolled seniors in this age group. In the 1979 survey, 92 dropouts and 266 seniors were included.

For marijuana, the household survey data estimated differences between dropouts and seniors at a level at or below the *least* extreme assumption made in the previous method (in which dropouts are assumed to have the same drug-use levels as absentees). While comforting to the authors of the present report, we must admit that we believe these household samples underrepresented the more drug-prone dropouts to some degree. Thus we concluded that estimates closer to those made under the second assumption in the previous method may be closer to reality—that is, that dropouts are likely to deviate from participating seniors by one and one-half times the amount that absentees deviate from them.

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[87] Fishburne, P. M., Abelson, H. I., & Cisin, I. (1980). *National survey on drug abuse: Main findings, 1979* (NIDA (ADM) 80-976). Washington, DC: U.S. Government Printing Office; Miller, J. D., et al., (1983). *National survey on drug abuse: Main findings, 1982* (NIDA (ADM) 83-1263). Washington, DC: U.S. Government Printing Office. See also Substance Abuse and Mental Health Services Administration. (1995). *National Household Survey on Drug Abuse: Main Findings 1992*. (DHHS Publication No. (SMA) 94-3012). Rockville, MD: Substance Abuse and Mental Health Services Administration.

We should note that there are a number of reasons for dropping out, many of which bear no relationship to drug use, including economic hardship in the family and certain learning disabilities and health problems. At the national level, the extreme groups such as those in jail or without a permanent place of residence are undoubtedly very small as a proportion of the total age groups and probably even as a proportion of all dropouts. Thus, regardless of their prevalence rates, they would be unable to move the overall prevalence estimates by a very large proportion except in the case of the most rare events—in particular, heroin use. We do believe that in the case of heroin use—particularly regular use—we are most likely unable to get a very accurate estimate even with the corrections used in this report. The same may be true for crack cocaine and PCP. For the remaining drugs, we conclude that our estimates based on participating seniors, though somewhat low, are not bad approximations for the age group as a whole.

Effects of Omitting Dropouts in Trend Estimates

Whether the omission of dropouts affects the estimates of trends in prevalence rates is a separate question, however, from the degree to which it affects absolute estimates at a given point in time. The relevant issues parallel those discussed earlier regarding the possible effects on trends of omitting the absentees. Most important is the question of whether the rate of dropping out has been changing in the country, since a substantial change would mean that seniors studied in different years would represent noncomparable segments of the whole class/age cohort. Fortunately for the purposes of this study, at least, the official government data provided in Figure A-1 indicate a quite stable rate of dropping out since 1972.

Since no sound evidence appears for an appreciable dropout rate change, the only reason for seniors' trend data to deviate from trends for the entire class cohort (including dropouts) would be if the constant proportion of dropouts showed trends that differed from senior trends; even then, because of their small numbers, dropouts would have to show dramatically different trends to change the whole age group trend. No hypothesis offered for such a differential shift among dropouts has been convincing, at least to these authors.

One hypothesis occasionally voiced was that more teens were being expelled from school, or voluntarily leaving school, because of their drug use; and that this explained the downturn in the use of many drugs being reported by the study in the 1980s. However, it is hard to reconcile this hypothesis with the virtually flat (or, if anything, slightly declining) dropout rates over the period displayed in Figure A-1, unless one posits a perfectly offsetting tendency for more completion among those who are less drug-prone—hardly a very parsimonious explanation. Further, the reported prevalence of some drugs remained remarkably stable throughout those years of the study (e.g., alcohol and opiates other than heroin) and the prevalence of some rose (cocaine until 1987, and amphetamines until 1981). These facts are not very consistent with the hypothesis that there had been an increased rate of departure by the most drug-prone. Certainly more teens leaving school in the 1980s had drug problems than was true in the 1960s. (So did more of those who stayed in.) However, they still seem likely to be very much the same segment of the population, given the degree of association that exists between drug use and deviance and problem behaviors of various sorts.

MORE RECENT UPDATE ON CORRECTIONS FOR DROPOUTS

We subsequently looked at additional data regarding the effects of dropout exclusion. One additional source of information is a special report from the 1988 National Household Survey on Drug Abuse.[88] This report compared selected drug use rates for 16–17-year-old respondents who were classified as currently enrolled in school or as having dropped out of school. The authors of that report concluded, "The percentage of youth aged 16 and 17 who reported use of any illicit drug, marijuana, cocaine, and alcohol did not differ significantly among dropouts and those currently enrolled in school" (p. 22). Differences in illicit drug use between high school graduates and dropouts were also slight among 21- to 25-year-olds.

The authors noted that their findings appeared somewhat contrary to popular conceptions, as well as to some other research. Moreover, they reported that preliminary data for 20- to 34-year-olds from the 1990 NHSDA showed higher rates of cocaine and marijuana use among dropouts. The authors conjectured that perhaps differences between dropouts and graduates emerge after age 25, when more young adults have finished college. They also noted that other variables, such as race, ethnicity, and socioeconomic status may confound the dropout versus graduate comparison. An additional problem was that, prior to the 1991 survey, the NHSDA did not include individuals who did not live in households; perhaps the more deviant dropouts were overrepresented in the excluded groups.

Subsequently, we have examined data from the 1991 National Household Surveys on Drug Abuse. Specifically, we obtained estimated prevalence rates for two key illicit drugs, marijuana and cocaine, among dropouts aged 16-18. Table A-1 indicates the lifetime and monthly prevalence rates for Monitoring the Future seniors and for NHSDA seniors and NHSDA dropouts.

As can be seen, the 1991 NHSDA dropouts aged 16-18 had distinctly higher cocaine and marijuana use than the NHSDA seniors and the 1991 MTF seniors. (This result is contradictory to the results from the earlier report based on 1988 data. The relatively small numbers of dropouts make definitive statements difficult.) As discussed earlier, however, the relatively small proportion of the population who are dropouts reduces the impact that their higher prevalence rates have on overall population estimates.

Table A-2 compares the total population prevalence estimates derived using two quite different methods discussed here. The first method shows the estimates that result when we use the method we previously described (which provided the data shown in Figure A-2), where the prevalence rate among dropouts is assumed to be higher than seniors present by 1.5 times the difference between seniors present and seniors absent. Column 2 in Table A-2 is calculated by reweighting the data for absenteeism and calculating the estimated prevalence among absentees.

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[88] National Institute on Drug Abuse. (1991). "Drug use among youth: Findings from the 1988 National Household Survey on Drug Abuse." (DHHS Publication No. (ADM) 91-1765). Rockville, MD: National Institute on Drug Abuse.

The prevalence among dropouts (column 4) is estimated by assuming that they differ from seniors present by a factor 1.5 times greater than the difference between seniors present and seniors absent. The data in columns 1 and 2 are combined in appropriate proportion to derive estimated prevalence among seniors present plus absentees (column 3). The data in columns 1, 2, and 4 are then combined in appropriate proportions to derive estimated prevalence rates for the entire class cohort (shown in column 6). (For 1991, the percentage of dropouts is estimated at 15% and the percentage of seniors absent is 15.9% [based on data collected in participating schools]; these figures result in the following distribution for the *total* age cohort: seniors present, 71.5%; seniors absent, 13.5%; and dropouts, 15%.)

The second method for estimating prevalence rates for dropouts (column 9) and the entire class cohort (column 10) is based on the estimated prevalence from MTF seniors present and seniors absent; it then adjusts for the missing dropout segment by assuming that the difference between NHSDA seniors versus NHSDA dropouts (column 8) is the best estimate of the difference between dropouts and stay-ins (column 10).

The data in columns 6 and 7 are prevalence rates reported among the 1991 NHSDA seniors and for dropouts aged 16-18, and column 8 shows the algebraic difference. This absolute "bias" is treated as an estimate of the difference between seniors (present plus absent) versus dropouts. This "bias" is then applied to the estimated prevalence based on MTF data of seniors present plus absent (column 3) to derive an estimate of the prevalence among dropouts (column 9). These estimates are higher than the NHSDA estimates because MTF estimates for non-dropouts are higher than the NHSDA estimates. Finally, the data in columns 3 and 9 are combined in appropriate proportion to derive estimates presented in column 10 for the entire cohort.

Note that the estimated prevalence rates among dropouts based on NHSDA data are not very different from the estimates derived using the "1.5" factor. (Compare columns 9 and 4.) Consequently, the "Total" estimates given in column 10 turn out to be highly similar to the "Total" estimates in column 5. This similarity suggests that the estimates of corrections for dropouts that we have been providing, based on earlier data, are probably quite reasonable. In fact, based on all of the NHSDA data, they may actually be conservatively high.

Finally, an additional piece of information relative to the comparison of drug use rates among students who stay in school versus dropouts comes from Fagan and Pabon (1990),[89] who report some comparison data between high school students and dropouts from six inner-city neighborhoods. About 1,000 male students and 1,000 female students were compared with 255 male dropouts and 143 female dropouts. Although dropouts were generally more delinquent, and more involved with substance use, there was also a great deal of variability by specific class of substances. As would be generally expected, marijuana use was lower among students, compared to dropouts. Psychedelic use, on the other hand, was *higher* among students than among dropouts. Use of tranquilizers and barbiturates was also higher among students. Amphetamine use was lower among male students, but higher among female students, compared to same-sex dropouts. Similarly, cocaine use was lower among male students, but higher among female students, compared to dropouts. Students of both genders reported more heroin use than did dropouts. Inhalant use did not differ significantly between students and dropouts.

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[89] Fagan, J. & Pabon, E. (1990). Contributions of delinquency and substance use to school dropout among inner-city youths. *Youth & Society, 21*, 306-354.

Overall, the data indicate some variation, depending on the class of drug. In fact, heroin use surprisingly was higher among students. The study shows that the usual assumption that dropouts invariably use drugs more than students is not always true.

SUMMARY AND CONCLUSIONS

In sum, while we believe that the prevalence of drug use for the cohort at large is somewhat underestimated, due to the omission of dropouts from the universe of the study, we think that the degree of underestimation is rather limited for all drugs (with the possible exceptions of heroin, crack, and PCP) and, more importantly, that trend estimates have been rather little affected. Short of having good trend data gathered directly from dropouts, we cannot close the case definitively. Nevertheless, we think that the available evidence argues strongly against alternative hypotheses—a conclusion that was also reached by the members of the 1982 NIDA technical review on this subject:[90]

> The analyses provided in this report show that failure to include these two groups (absentees and dropouts) does not substantially affect the estimates of the incidence and prevalence of drug use.

EXAMPLES OF REVISED ESTIMATES FOR TWO DRUGS

Figure A-2 provides the prevalence and trend estimates of marijuana and cocaine, for both the lifetime and 30-day prevalence periods, showing (a) the original estimates based on *participating seniors* only; (b) the empirically derived, revised estimates based on *all seniors*, including the absentees; and (c) estimates for the *entire class/age cohort*. The last estimate was developed using the assumption judged to be most reasonable—namely that the prevalence rate for dropouts differs from the prevalence rate for participating seniors by one and one-half times the amount that the prevalence rate for absentees does. *Estimates were calculated separately for each year, thus taking into account any differences from year to year in the participation or absentee rates.* The dropout rate was taken as a constant 15% of the age group across all years, based on Census estimates.

As Figure A-2 illustrates, any difference in the slopes of the trend lines between the original and revised estimates is extremely, almost infinitesimally, small. The prevalence estimates are higher, of course, but not dramatically so, and certainly not enough to have any serious policy implications. As stated above, the corrections for eighth- and tenth-grade samples should be considerably less, and there is certainly no reason to think that absentee or dropout rates at those levels have changed since 1991 in any way that could have changed their trend stories. Therefore, we have confidence that the trend stories that have shown up for the in-school populations represented in this study would be very similar to the trend stories that would pertain if the entire age cohorts had been the universes from which we sampled.

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[90] Clayton, R. R. & Voss, H. L. (1982). *Technical review on drug abuse and dropouts.* Rockville, MD: National Institute on Drug Abuse.

TABLE A-1.
Comparison of 1991 Monitoring the Future Seniors, NHSDA Seniors, and NHSDA Dropouts

	MTF Seniors	NHSDA Seniors	NHSDA Dropouts 16-18
Marijuana			
Lifetime	36.7	31.9	60.7
30-Day	13.8	11.6	21.0
Cocaine			
Lifetime	7.8	8.6	20.0
30-Day	1.4	1.3	2.3

TABLE A-2.
Estimated Prevalence Rates for Marijuana and Cocaine, 1991, Based on Data from Monitoring the Future and The National Household Survey on Drug Abuse

	Monitoring the Future					NHSDA			Combined Approach	
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
	Seniors Present	Seniors Absent	Seniors Absent & Present	Dropouts	Total	Seniors	Dropouts (Ages 16-18)	Difference	Dropouts	Total
Marijuana										
Lifetime	36.7	49.9	38.8	56.5	41.4	31.9	60.7	28.8	67.6	43.1
30-Day	13.8	22.0	15.1	26.1	16.7	11.6	21.0	9.4	24.5	16.5
Cocaine										
Lifetime	7.8	15.3	9.0	19.1	10.3	8.6	20.0	11.4	20.4	10.7
30-Day	1.4	2.7	1.6	3.3	1.9	1.3	2.3	1.0	2.6	1.8

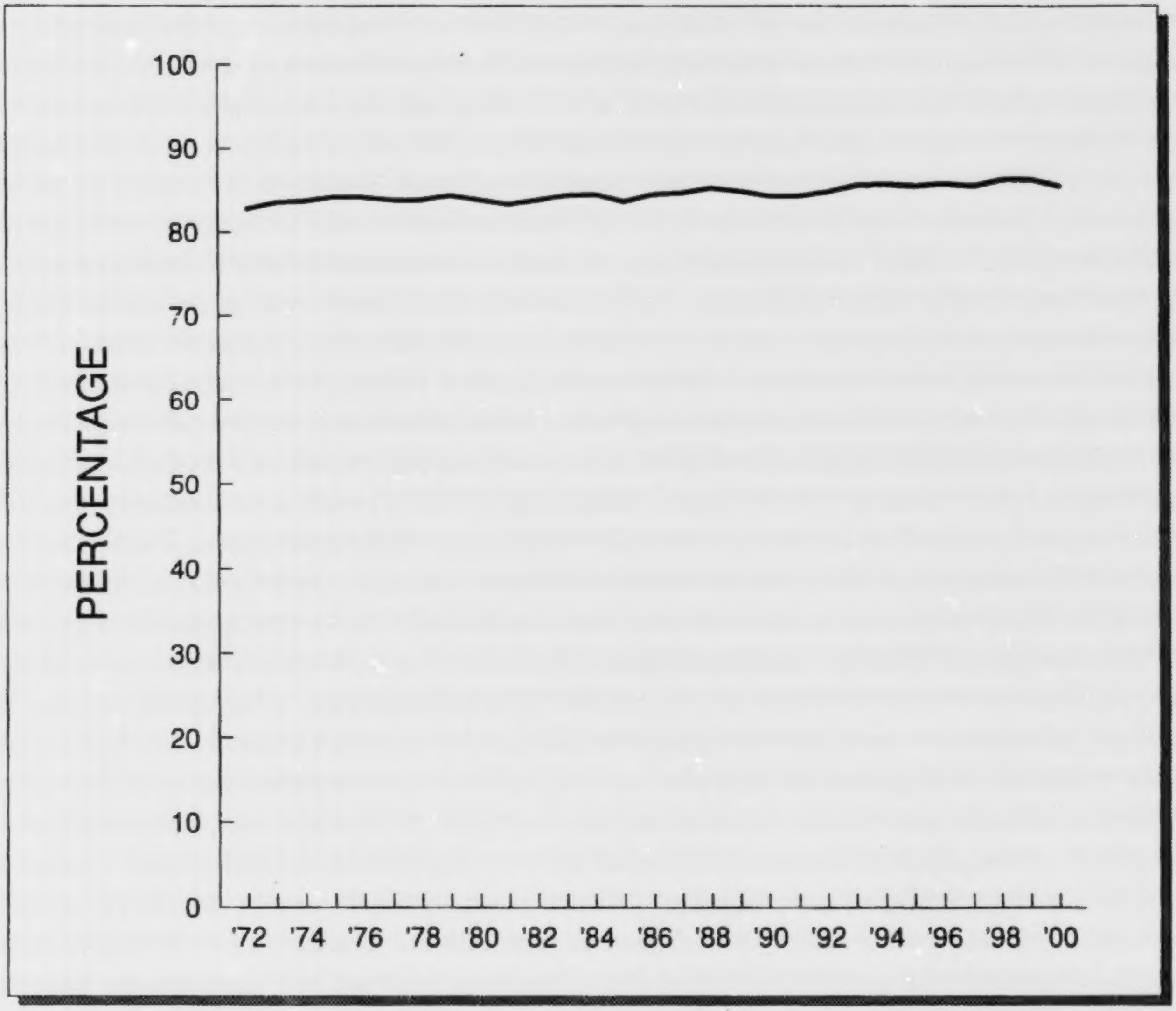
NOTES: The entries in columns are as follows:

(1) Estimates based on all MTF seniors who completed questionnaires.
(2) Estimated prevalence rates among seniors who were absent (using data from seniors who were present, as explained in text).
(3) Estimated prevalence rates among seniors present plus seniors who were absent.
(4) Estimated prevalence rates among dropouts, based on assumptions described in text.
(5) Estimated prevalence rates among seniors present, seniors who were absent, and same-age dropouts.
(6) Estimates based on all NHSDA respondents who were high school seniors.
(7) Estimates based on all NHSDA respondents, 16-18 years old, who were not attending school and had not graduated.
(8) Difference between columns 6 and 7, that is, the difference between all NHSDA seniors and dropouts; this is considered a valid estimate of the population difference between seniors and dropouts.
(9) Sum of columns 3 and 8, combining MTF estimated use among all seniors (present and absent) plus the estimated population difference between all seniors and dropouts, resulting in an estimated prevalence among dropouts.
(10) Weighted combined estimate of prevalence, using MTF estimates for all seniors (column 3), and estimate of prevalence among dropouts (column 9).

FIGURE A-1

High School Completion by Persons 20-24 Years Old, 1972-2000

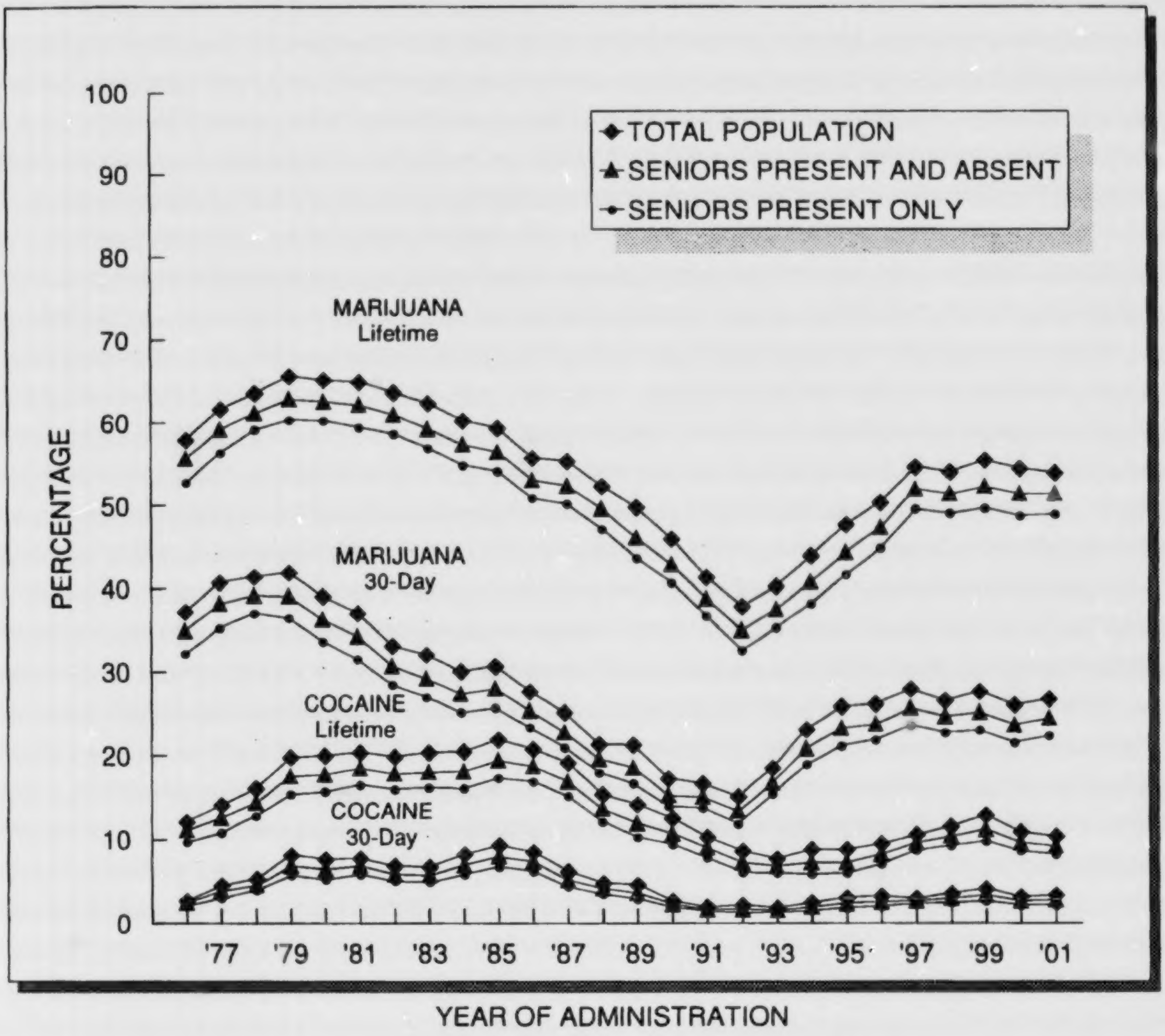
U.S. Population



Source: U.S. Bureau of the Census, Current Populations Survey, published and unpublished data; and 1980 Census.

FIGURE A-2

Estimates of Prevalence and Trends for the Entire Age/Class Cohort, Adjusting for Absentees and Dropouts for Twelfth Graders



Appendix B

DEFINITION OF BACKGROUND AND DEMOGRAPHIC SUBGROUPS

Throughout this volume, data are presented for the total sample of eighth, tenth, and twelfth graders. Data are also presented for many subgroups of students. The following are brief descriptions of the background and demographic subgroups used in this volume. (Note: All case counts provided in the tables are based on weighted Ns.)

Total: The total sample of respondents in a given year of the study.

Gender: *Male and female.* Respondents with missing data on the question asking the respondent's gender are omitted from the data presented by gender.

College Plans: Respondents not answering the college plans question are omitted from both groupings. College plans groupings are defined as follows:

None or under 4 years. Respondents who indicate they "definitely won't" or "probably won't" graduate from a four-year college program. (Note that, among those who do not expect to complete a four-year college program, a number still expect to get some post-secondary education.)

Complete 4 years. Respondents who indicate they "definitely will" or "probably will" graduate from a four-year college program.

Region: Region of the country in which the respondent's school is located. There are four mutually exclusive regions of the country based on Census categories, defined as follows:

Northeast. Census classifications of New England and Middle Atlantic states include Maine, New Hampshire, Vermont, Massachusetts, Rhode Island, Connecticut, New York, New Jersey, and Pennsylvania.

North Central. Census classifications of East North Central and West North Central states include Ohio, Indiana, Illinois, Michigan, Wisconsin, Minnesota, Iowa, Missouri, North Dakota, South Dakota, Nebraska, and Kansas.

South. Census classifications of South Atlantic, East South Central, and West South Central states include Delaware, Maryland, District of Columbia, Virginia, West Virginia, North Carolina, South Carolina, Georgia, Florida, Kentucky, Tennessee, Alabama, Mississippi, Arkansas, Louisiana, Oklahoma, and Texas.

West. Census classifications of Mountain and Pacific states include Montana, Idaho, Wyoming, Colorado, New Mexico, Arizona, Utah, Nevada, Washington, Oregon, and California.

Population Density: Population density of the area in which the schools are located. There are three mutually exclusive groups that have been variously defined, as described below. (The 1975-1985 samples were based on the 1970 Census; in 1986 one-half of the sample was based on the 1970 Census, the other half of the sample was based on the 1980 Census; in 1987 through 1993 the samples were based on the 1980 Census; in 1994 half of the sample was based on the 1980 Census and half on the 1990 Census; and after 1994, all samples were based on the 1990 Census.) The three levels of population density were defined in terms of Standard Metropolitan Statistical Area (SMSAs) designations through 1985, when we changed to the new Census Bureau classifications of Metropolitan Statistical Areas (MSAs), as described here:

Large MSAs. In the 1975-1985 samples these were the 12 largest Standard Metropolitan Statistical Areas (SMSA) as of the 1970 Census: New York, Los Angeles, Chicago, Philadelphia, Detroit, San Francisco, Washington, Boston, Pittsburgh, St. Louis, Baltimore, and Cleveland. From 1986 to 1994, the "large MSA" group consisted of the 16 largest MSAs as of the 1980 Census. These 16 MSAs include all of the MSAs mentioned above (except Cleveland) plus the MSAs of Dallas-Fort Worth, Houston, Nassau-Suffolk, Minneapolis-St. Paul, and Atlanta.

Beginning with the first-year schools in 1994, the new sample design was developed, based on the 1990 Census. In the 1990s sample only the eight largest MSAs are represented with certainty at all three grade levels; the 16 next largest MSAs are divided into pairs, with half randomly assigned to the twelfth- and eighth-grade samples and the other half assigned to the tenth-grade sample. (The purpose of this split was to reduce the study's burden on each MSA. Since the tenth- and eighth-grade samples both require high schools, they were intentionally divided.) The eight largest MSAs are New York, Los Angeles, Chicago, Philadelphia PA-NJ, Detroit, Washington DC-MD-VA, Dallas-Ft. Worth, and Boston. The next 16 largest MSAs are Houston, Atlanta, Seattle-Tacoma, Minneapolis MN-WI, St. Louis MO-IL, San Diego, Baltimore, Pittsburgh, Phoenix, Oakland, Cleveland, Miami-Hialeah, Newark, Denver, San Francisco, and Kansas City MO-KS.

Other MSAs. Includes all other Metropolitan Statistical Areas (MSAs), as defined by the Census, except those listed previously. Except in the New England states, an MSA is a county or group of contiguous counties that contain at least one city of 50,000 inhabitants or more, or "twin cities" with a combined population of at least 50,000. In the New England states MSAs consisted of towns and cities, instead of counties, until 1994, after which New England Consolidated Metropolitan Areas (NECMAs) were used to define MSAs. Each MSA must include at least one central city, and the complete title of an MSA identifies the central city or cities. For the complete description of the criteria used in defining MSAs, see the Office of Management and Budget publication, *Metropolitan Statistical Areas, 1990* (NTIS-PB90-214420), Washington, D.C. The population living in MSAs is designated as the metropolitan population.

Non-MSAs. Includes all areas not designated as Metropolitan Statistical Areas (MSAs)—in other words, they do not contain a town of at least 50,000 population. The population living outside MSAs constitutes the nonmetropolitan population.

Parental Education: This is an average of mother's education and father's education based on the respondent's answers about the highest level of education achieved by each parent, using the following scale: (1) completed grade school or less, (2) some high school, (3) completed high school, (4) some college, (5) completed college, (6) graduate or professional school after college. Missing data was allowed on one of the two variables. The respondent is instructed, "If you were raised mostly by foster parents, stepparents, or others, answer for them. For example, if you have both a stepfather and a natural father, answer for the one that was most important in raising you."

Race/ Ethnicity: A general question asks, "How do you describe yourself?"

White. Includes those respondents who describe themselves as White or Caucasian.

Black. Includes those respondents who in 1975-1990 describe themselves as Black or Afro-American or who, after 1990, describe themselves as Black or African American.

Hispanic. Includes those respondents who in 1975-1990 describe themselves as Mexican American or Chicano, or Puerto Rican or other Latin American. After 1990 this group includes those respondents who describe themselves as Mexican American or Chicano, Cuban American, Puerto Rican American, or other Latin American. After 1994, the term Puerto Rican American was shortened to Puerto Rican.

Appendix C

ESTIMATION OF SAMPLING ERRORS

This appendix provides some guidance for those who wish to calculate confidence intervals around the percentage estimates reported in this volume or to assess the statistical significance of differences between percentage estimates.

All of the percentages reported in this volume are estimates of the response percentage that would have been obtained if, instead of using a sample survey, we had surveyed all eighth-, tenth-, or twelfth-grade students throughout the United States. Because we surveyed only a sample, and not the entire population, there are sampling errors associated with each estimate. For any particular percentage resulting from a sample survey, we cannot know exactly how much error has resulted from sampling, but we can make reasonably good estimates of "confidence intervals"—ranges within which the "true" population value is very likely to fall. The word "true" in this context refers to the value that would be found if we had surveyed the total population—that is, all eighth-, tenth-, or twelfth-grade students in the United States. This concept of "true" population value does not take account of biases that might occur due to refusals, intentional or unintentional distortion of responses, faulty question wording, and other factors.

CALCULATING CONFIDENCE INTERVALS

The most straightforward types of samples, from a statistical standpoint at least, are simple random samples. In such samples the confidence limits for a proportion are influenced by the size of the sample, or particular subsample, under consideration, and also by the value of the proportion. (Although the estimates in this volume are expressed as percentages, this appendix generally deals with the equivalent proportion, for ease of presentation.)

The ***standard error***[91] of a proportion *p* based on a simple random sample of *n* cases is equal to:

$$\sqrt{p(1.0-p)/n} \qquad (1)$$

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[91] The standard error of an estimate is a measure of sampling error; it is defined as the standard deviation of the sampling distribution of the statistic. It is used to construct the confidence interval around an estimate.

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With a large number of cases, a symmetrical ***confidence interval*** around p would be approximated by:

$$p \pm z\sqrt{p(1.0-p)/n} \tag{2}$$

where z is the appropriate value from the z-distribution. For a 95% confidence interval, for example, $z = 1.96$.

Many of the proportions presented in this volume represent rare events, with values being close to zero. At those low values, a more appropriate confidence interval would be asymmetric. A more exact calculation for confidence intervals, which will usually produce asymmetric confidence limits, is[92]:

$$\frac{n}{n+z^2}[p+\frac{z^2}{2n} \pm z\sqrt{\frac{p(1-p)}{n}+\frac{z^2}{4n^2}}] \tag{3}$$

Significance of Difference Between Two Proportions

In addition to estimating the sampling error around a single proportion, we often wish to test the significance of a difference between two proportions, such as the difference between the proportion of marijuana users among male students as compared to among female students. The following formula produces a statistic that can be referred to a standard normal distribution, assuming reasonably large numbers of cases:

$$z = \frac{p_1 - p_2}{\sqrt{p_e(1-p_e)\frac{n_1+n_2}{n_1 n_2}}} \tag{4}$$

where

$$p_e = \frac{n_1 p_1 + n_2 p_2}{n_1 + n_2} \tag{5}$$

and p_e is the estimated population proportion, p_1 is the observed proportion (of users) in the first group, p_2 is the observed proportion in the second group, n_1 is the number of cases in the first group, and n_2 is the number of cases in the second group.

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[92] Formula 6.11.1, page 240, in Hays, W. L., *Statistics* (4th ed.), Holt, Rinehart, & Winston, 1988.

DESIGN EFFECTS IN COMPLEX SAMPLES

Formulas (1) - (5) are appropriate only for simple random samples.[93] In complex samples such as those used in the Monitoring the Future surveys, it is also necessary to take account of the effect that the sampling design has on the size of standard errors. (A complex sample is any sample that is not a simple random sample.)

The Monitoring the Future sample design incorporates stratification, clustering, and differential weighting to adjust for differential probabilities of selection. These design elements influence sampling error. While stratification tends to heighten the precision of a sample compared with a simple random sample of the same size (usually reducing the sampling error), the effects of clustering and weighting reduce precision (usually increasing the sampling error). The net result is that complex sample designs almost always result in increased sampling error (but they usually result in more efficient samples in all other respects). Therefore, it is not appropriate to apply the standard, simple random sampling formulas to such complex samples in order to obtain estimates of sampling errors.

Methods exist for correcting for this underestimation. Kish (1965, p. 258) defines a correction term called the ***design effect*** (DEFF), where

$$DEFF = \frac{\textit{actual sampling variance}}{\textit{variance expected from a random sample}} \tag{6}$$

Thus, if the actual sampling variance in a complex sample is four times as large as the expected sampling variance from a simple random sample with the same number of cases, the DEFF is 4.0. Because confidence intervals are proportionate to the square root of variance, the confidence intervals for such a sample would be twice as large (because the square root of 4 is 2) as the confidence interval for a simple random sample with the same number of cases. If an estimate of design effect is available, one of the simplest correction procedures to follow is to divide the actual numbers of cases by the design effect (thereby "depreciating" the actual number to its equivalent value in simple random sample terms) and then employ the standard statistical procedures that are available for application to simple random samples. Thus, for example, if the design effect (DEFF) for a sample of 16,000 were 4.0, then one could divide the 16,000 by 4.0 and the result, 4,000, could be entered as the value of "n" in statistical tables and formulas designed for use with simple random samples. In short, the strategy involves dividing the actual number of cases by the appropriate DEFF in order to get a "simple random sampling equivalent n" or, more simply, an "effective n" for use in statistical procedures designed for random samples.

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[93] A simple random sample is one in which each element is selected independently of, and with the same probability as, all other elements in the universe of elements from which the sample is drawn.

Estimating Design Effects

In principle, every different statistic resulting from a complex sample can have its own design effect and, in fact, different statistics in the same sample may have quite different design effects. However, it is not feasible to compute every design effect, nor would it be feasible to report every one. Moreover, "Sampling errors computed from survey samples are themselves usually subject to great sampling variability . . . Sampling theory, and experience with many and repeated computations, teach us not to rely on the precision of individual results, even when these are based on samples with large numbers of elements" (Kish, Groves, & Krotki, 1976, p. 19).[94] Thus, in practice, design effects are averaged across a number of statistics, and these average values are used to estimate the design effects for other statistics based on the same sample. Sometimes, a single design effect is applied to all the estimates in a given study. This is usually an oversimplification. In the present study a rather extensive exploration of design effects revealed a number of systematic differences. These systematic differences have to do with the particular measures being examined, the subgroups involved, and the question of whether a trend over time is being considered. Thus, we provide here a more elaborated set of estimates of design effects that vary along these several dimensions.[95]

Factors Affecting Design Effects

Design effects are systematically related to two factors: the amount of "clustering" and the average cluster size. (Each school in the Monitoring the Future design can be considered a cluster of cases, or students.) Specifically,

$$DEFF = 1 + \rho(\tilde{n} - 1) \qquad (7)$$

(Kish, 1965, section 5, p. 162; Kalton, 1983, p. 31)

where $\tilde{n}$ is the average cluster size and ρ is the intraclass correlation coefficient measuring the degree of cluster homogeneity. Note that the equality is approximate.

An important consequence of this relationship is that subgroups such as male or female that are typically represented within all clusters (that is, all schools) have a lower average cluster size. All (or virtually all) of the schools in the sample have both male and female students. Thus, each of these subgroups is spread more or less evenly across the full number of clusters (schools). Because each of these subgroups includes approximately half of the total sample, the average number of cases per cluster is about half as large as for the total sample, and this leads to a smaller design effect than is found for the total sample. (There is usually not much difference in ρ, the measure of cluster homogeneity.) Other subgroups involving college plans or parental education are also distributed across all clusters (although not as evenly as gender) and thus are subject to the same phenomenon of smaller design effects because of the smaller number of cases per cluster. This is in contrast to the situation with subgroups such as region of the country, each of which will normally have the same average cluster size as the total sample from the whole country—but considerably fewer clusters. The former type of subgroup (*cross-class*) will usually have a lower design effect, while the latter type of subgroup (*segregated*) will usually have a design effect similar to the overall. In this study, cross-class subgroups include gender, college plans, and parental education. Segregated subgroups include region and population density. Race/ethnicity is a mixed case, in that there tends to be substantial clustering of various racial/ethnic groups by school. Consequently, design effects for minority race/ethnic subgroups tend to be somewhat higher than average, though this tendency is not always evidenced. Because such a high proportion of respondents in most schools are White, the associated design effects for them tend to be similar to the overall design effects.

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[94] Kish L., Groves R. M., & Krotki K. P. (1976). *Sampling errors for fertility surveys* (Occasional Paper Series No. 17). Voorburg, The Netherlands: International Statistical Institute.

[95] All design effects were estimated using the Taylor series expansion method.

As an empirical generalization, we have observed that design effects tend to be related to the actual prevalence rates of substance use (or p value). Thus, rarely used substances such as heroin typically have low design effects, while more commonly used substances such as cigarettes, alcohol, and marijuana typically have high design effects. A corollary fact is that the design effect associated with the estimate of lifetime prevalence of any given substance is usually greater than (or equal to) the design effect associated with annual prevalence of that substance, which is in turn greater than the design effect for monthly prevalence. This tendency would imply that eighth-grade design effects would typically be lower than those for tenth grade, which would be lower than twelfth grade (because prevalence rates are usually greater in the upper grades). However, eighth-grade schools tend to be more homogenous within schools in socioeconomic terms than are high schools, because they tend to draw from smaller geographic areas; this tends to make eighth-grade schools more homogenous with respect to drug use, which would lead to larger design effects. The combination of factors generally leads to slightly lower design effects for the lower grade levels (although not in all cases).

Design Effects for Differences Between Two Proportions

Trends between two non-adjacent years. A trend over an interval greater than one year (for example, a comparison between 1994 and 1980) is basically a comparison between estimates from two independent samples. Therefore, the design effects for a single estimated proportion is appropriate. The relevant design effects for non-adjacent years are presented in Tables C-2a through C-2g.

Trends between adjacent years. One of the central purposes of the Monitoring the Future project is to monitor trends over time; indeed, the study procedures have been standardized across years insofar as possible in order to provide the opportunity for sensitive measurement of change. One of the factors designed to produce an added degree of consistency from one year to the next is the use of each school for two data collections, which means that for any two successive years half of the sample of schools is the same. This means that there is a good deal of consistency in the sampling and clustering of the sample from one year to the next. As a result, when one-year comparisons are made between adjacent years, the design effects for the trend estimate are appreciably smaller than if completely independent samples of schools had been drawn each year. In other words, the samples in adjacent years are not independent; on the contrary, there is a considerable degree of covariance between them. This covariance, or partial "matching," reduces the design effect for differences observed between adjacent years, compared to what they would have been with totally independent samples.

In order to estimate the extent of "shrinkage," we calculated about 95 DEFFs for adjacent one-year trend data where we had prevalence data for the same grade/drug combinations. The relationship between the two sets of DEFFs (prevalence versus one-year trend) was found to be approximately linear, with a product-moment correlation of .88 for DEFFs (and .89 for the square root of DEFF). This seemed sufficiently high to justify simply estimating the linear relation, predicting the trend DEFF from the prevalence DEFF, and using that to estimate the one-year trend DEFF for all measures. The resulting design effects are given in Tables C-1a through C-1g.

Comparisons between subgroups within a single year. We examined a variety of design effects involving comparisons between subgroups based on gender, college plans, and parental education. A considerable simplification was achieved when we noted that generally the average DEFF values for subgroup comparisons were quite similar to the average DEFF values for one-year trends.

With respect to segregated variables like region and population density, the subgroup samples are essentially independent; therefore, the prevalence design effects are appropriate for comparisons among these subgroups. Design effects for subgroup comparisons within a single year are provided in Tables C-3a through C-3g.

Differentiating design effects by drug classes. Our exploration of design effects led us to the conclusion that various groups of drugs tended to have very similar values. Thus, the following groupings of drugs were created for the purpose of simplification:

(a) An index of use of any illicit drug other than marijuana
(b) An index of use of any illicit drug, an index of use of any illicit drug including inhalants, and marijuana
(c) Hallucinogens, LSD, cocaine, and other cocaine (i.e., not crack)
(d) Nitrites, PCP, MDMA (ecstasy), crack cocaine, heroin, methampetamine, ice (crystal methamphetamine), methaqualone, Rohypnol, and steroids
(e) Hallucinogens other than LSD, narcotics other than heroin, sedatives, barbiturates, and tranquilizers
(f) Inhalants and amphetamines
(g) Alcohol (including use of alcohol and getting drunk), cigarettes, and smokeless tobacco

Design effects were found to be generally similar for all the drugs contained within each grouping but somewhat different across groupings. Therefore, each of the three general tables of design effects (Tables C1, C2, and C3) has seven parts corresponding to each of these seven drug groupings (i.e., parts a through g).

In general, intervals of use (lifetime, annual, 30-day, daily) are distinguished. For some substances, though, the variation by interval was slight enough to ignore.

On both logical and empirical grounds, there seemed little reason to distinguish among the "segregated" groups: total sample, and groups defined by region and by population density. The average cluster size should be about the same, and there should not be much variation in the degree to which drug use clusters by school within these categories. Some variation was evident empirically, but it did not appear to be systematic. Thus, these groups are assigned equal design effects.

Separate design effect values are provided for estimates of use (prevalence) among the three grade levels (8, 10, 12), for subgroups defined by gender (males, females), college plans (planning to complete 4 years, not planning to complete 4 years), parental education (five levels), and race/ethnicity (African American, White, Hispanic). In some cases, particularly for the less prevalent drugs where design effects are very low, the estimated design effects in fact do not vary by group.

Estimates of design effects are also provided for one-year trends. For trends across nonadjacent years, the standard design effects for prevalence are appropriate. Estimates of design effects are also provided separately for comparisons of subgroups within a given year.

DETERMINING EFFECTIVE N'S

Tables C1 through C3 provide estimates of design effects that can be used to "shrink" the weighted numbers of cases given in each table in this volume to an "effective n," which is appropriate for use in standard formulas in calculating sampling errors, confidence intervals, and statistical significance of differences in proportions. The tables are in three sets: the first set (C-1a through C-1g) is appropriately used for a one-year trend across adjacent years; the second set (C-2a through C-2g) is for a single prevalence or a comparison across non-adjacent years; and the third (C-3a through C-3g) for a comparison between subgroups in a single year. (Adjacent years differ from non-adjacent years in that half of the schools are part of both years' samples.)

To use the tables, the reader should determine whether the design effect is needed for a one-year trend (Table C1), a single prevalence (Table C2), or a subgroup comparison within a year (Table C3); and which substance is involved (a-g); and then the appropriate table can be accessed. Within the table, the reader needs to determine which subgroup (or total sample) is involved, which grade level, and which interval of use. Then, the appropriate design effect can be referenced and used to deflate the weighted number of cases to arrive at an "effective n." This effective n would be used in formulas (1) to (5), given previously.

As an example, suppose one wished to compare the 30-day prevalence of marijuana use for the total eighth-grade sample in 1996 with 1997. Tables 2-1 through 2-3, provided earlier in this volume, indicate that prevalence was 11.3% in 1996, based on 17,800 cases; and 10.2% in 1997, based on 18,600 cases. Table C-1b shows that an appropriate design effect for eighth-grade 30-day marijuana use is 3.2. Each year's n would be divided by 3.2, producing effective n's of 5562 and 5812. These effective n's should be used in formula (4) given earlier in this appendix, to test whether the difference in proportions between the two years is statistically significant.

A Special Note on Racial/Ethnic Subgroups

As noted earlier in this volume, the prevalence estimates for racial/ethnic subgroups are reported only for two-year averages, instead of for single years, because of limited sample sizes and a higher degree of clustering. The design effects for prevalence rates for racial/ethnic subgroups provided in Tables C-2a through C-2g are appropriately applied to the number of cases provided for the two years combined. In calculating a one-year trend between the two most recent prevalence figures, however, one is in effect taking a trend between a prevalence based on data from the most recent single year and a prevalence based on data from a single year two years prior to the most recent year. For example, comparing the estimate based on combined 1994 and 1995 data with the combined 1993 and 1994 data is equivalent to comparing 1993 and 1995 because the 1994 observed value is contained in both data points and therefore cancels itself out. The design effects for trends provided in Tables C-1a through C-1g are therefore appropriately applied to one-half of the number of cases provided in each table for the combined years.

A NOTE ON INTERPRETATION OF DIFFERENCES AND STATISTICAL SIGNIFICANCE

This appendix provides the reader with procedures to assess the statistical significance of differences over time or between groups. In the text of this report we frequently comment on particular differences over time or between groups in terms of drug use. In general, our conclusions are based to a considerable extent on *patterns* of cross-time changes rather than on the statistical significance of any single comparison. That is, we assess the overall pattern of evidence, rather than any single finding, to assess the likely validity of the finding.

There are at least five types of patterns that we inspect:

(1) Replication across grades

Because the annual samples of eighth-, tenth-, and twelfth-grade students are three *completely independent samples*, one pattern that we look for is the similarity or contrast in changes that occur in the three groups. Although there is no requirement that changes occur similarly in all three groups, to the extent that a change is similar (or at least not inconsistent), we are more confident in its validity.

(2) Replication across subgroups

To the extent that a change has occurred across a broad range of subgroups, we are more confident in its validity. For example, if an increase in use occurs among males and females, among noncollege-bound and college-bound, in different regions, etc., we would be more inclined to accept the change as reflecting an underlying reality.

(3) Replication across half-samples

Because half of the schools remain the same from one year to the next, any changes across a one-year interval can be examined for the half-sample that has remained constant. In other words, the data are examined for only the schools that provide data for both years. This removes any differences that may have occurred due simply to different schools being included.

(4) Consistency across several years

Although each year's report emphasizes the changes in the most recent year, we pay careful attention to trends across longer time intervals. For example, when we observe a third or fourth consecutive year of consistent change in one direction (up or down), then we are more inclined to accept the validity of the general trend, even if none of the changes in any of the one-year intervals was statistically significant.

(5) Replication across different variables

Another type of replication or validation involves examining trends in different variables that would be expected to covary. For example, we have observed that perceived risk of harm associated with use of a specific substance tends to covary (negatively) with actual use of the substance. Similarly, we would expect reports of friends' use of specific substances to covary (positively) with reports of the respondents' own use. To the extent that different variables covary in the expected manner, then we would be more confident in interpreting the results.

Although we do not always discuss all of these various contributions to our confidence, we do generally assess them, prior to making interpretations.

Tables of Design Effects to Use in Calculating "*Effective Ns*"

Table C-1, One-Year Trends in Prevalence

(a) An index of use of any illicit drug other than marijuana
(b) An index of use of any illicit drug, an index of use of any illicit drug including inhalants, and marijuana
(c) Hallucinogens, LSD, cocaine, and other cocaine (i.e., not crack)
(d) Nitrites, PCP, crack cocaine, heroin with and without a needle, methamphetamine, ice, methaqualone, Rohypnol, GHB, ketamine, and steroids
(e) Hallucinogens other than LSD, MDMA, narcotics other than heroin, sedatives, barbiturates, tranquilizers, and bidis
(f) Inhalants and amphetamines
(g) Alcohol (including use of alcohol and getting drunk), cigarettes, and smokeless tobacco

Table C-2, Prevalence or Change in Prevalence Across Non-Adjacent Years

(a) An index of use of any illicit drug other than marijuana
(b) An index of use of any illicit drug, an index of use of any illicit drug including inhalants, and marijuana
(c) Hallucinogens, LSD, cocaine, and other cocaine (i.e., not crack)
(d) Nitrites, PCP, crack cocaine, heroin with and without a needle, methamphetamine, ice, methaqualone, Rohypnol, GHB, ketamine, and steroids
(e) Hallucinogens other than LSD, MDMA, narcotics other than heroin, sedatives, barbiturates, tranquilizers, and bidis
(f) Inhalants and amphetamines
(g) Alcohol (including use of alcohol and getting drunk), cigarettes, and smokeless tobacco

Table C-3, Subgroups Comparisons Within Any Single Year

(a) An index of use of any illicit drug other than marijuana
(b) An index of use of any illicit drug, an index of use of any illicit drug including inhalants, and marijuana
(c) Hallucinogens, LSD, cocaine, and other cocaine (i.e., not crack)
(d) Nitrites, PCP, crack cocaine, heroin with and without a needle, methamphetamine, ice, methaqualone, Rohypnol, GHB, ketamine, and steroids
(e) Hallucinogens other than LSD, MDMA, narcotics other than heroin, sedatives, barbiturates, tranquilizers, and bidis
(f) Inhalants and amphetamines
(g) Alcohol (including use of alcohol and getting drunk), cigarettes, and smokeless tobacco

TABLE C-1a
Design Effects for 1-Year Trends in Prevalence of Use

		INDEX OF ANY ILLICIT DRUG OTHER THAN MARIJUANA			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	3.9	3.3	2.6	1.2
	10th Grade	4.3	3.6	2.7	1.2
	12th Grade	4.9	4.4	3.3	1.7
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.8	2.5	2.2	1.3
	10th Grade	3.1	2.7	2.4	1.2
	12th Grade	3.2	2.9	2.4	1.7
Female	8th Grade	3.1	2.8	2.1	1.2
	10th Grade	3.3	2.9	2.2	1.1
	12th Grade	3.5	3.3	2.8	1.6
College Plans:					
None or under 4 yrs.	8th Grade	2.0	1.9	1.6	1.2
	10th Grade	2.2	2.1	1.8	1.4
	12th Grade	2.1	1.9	1.6	1.5
Complete 4 years	8th Grade	3.5	2.8	2.3	1.2
	10th Grade	4.1	3.3	2.5	1.1
	12th Grade	4.4	3.8	3.0	1.7
Parental Education:					
Any stratum	8th Grade	2.1	2.0	1.6	1.1
	10th Grade	2.2	2.0	1.7	1.2
	12th Grade	2.4	2.2	1.7	1.4
Racial/Ethnic Group:					
White	8th Grade	4.0	3.8	2.9	1.4
	10th Grade	4.9	4.3	3.0	1.5
	12th Grade	4.2	4.0	2.9	2.0
Black	8th Grade	2.7	2.0	1.5	1.2
	10th Grade	3.0	2.6	1.9	1.3
	12th Grade	3.7	3.3	3.0	1.6
Hispanic	8th Grade	3.8	2.7	2.0	1.5
	10th Grade	4.5	2.9	1.8	1.3
	12th Grade	6.9	5.8	3.0	1.9

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-1b
Design Effects for 1-Year Trends in Prevalence of Use

		INDEX OF ANY ILLICIT DRUG, INDEX OF ANY ILLICIT DRUG INCLUDING INHALANTS, AND MARIJUANA			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	4.1	3.5	3.2	1.4
	10th Grade	5.0	4.3	3.4	1.5
	12th Grade	6.9	6.6	5.4	2.8
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.4	2.4	2.4	1.5
	10th Grade	3.4	3.0	3.0	1.5
	12th Grade	3.8	3.4	3.0	2.7
Female	8th Grade	3.4	3.0	2.4	1.3
	10th Grade	4.0	3.4	2.7	1.1
	12th Grade	4.6	4.6	4.5	2.6
College Plans:					
None or under 4 yrs.	8th Grade	2.3	2.3	2.0	1.3
	10th Grade	2.8	2.8	2.7	2.0
	12th Grade	2.4	2.4	2.1	2.1
Complete 4 years	8th Grade	3.3	2.4	2.4	1.5
	10th Grade	5.1	4.0	3.2	1.1
	12th Grade	6.1	5.3	4.5	3.0
Parental Education:					
Any stratum	8th Grade	2.1	2.1	1.9	1.1
	10th Grade	2.5	2.3	2.2	1.4
	12th Grade	3.0	2.8	2.3	1.9
Racial/Ethnic Group:					
White	8th Grade	4.5	4.4	4.1	1.9
	10th Grade	7.2	5.8	4.5	2.1
	12th Grade	5.0	5.0	4.2	3.7
Black	8th Grade	3.0	2.1	1.3	1.1
	10th Grade	4.0	4.0	2.6	1.5
	12th Grade	6.0	6.0	6.0	2.5
Hispanic	8th Grade	2.6	2.6	2.1	2.0
	10th Grade	4.9	3.0	1.6	1.5
	12th Grade	12.0	11.7	5.3	3.4

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-1c
Design Effects for 1-Year Trends in Prevalence of Use

		HALLUCINOGENS (UNADJUSTED AND ADJUSTED), LSD, COCAINE, AND OTHER COCAINE			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	4.3	3.5	2.5	1.1
	10th Grade	4.3	3.5	2.5	1.1
	12th Grade	4.3	3.5	2.5	1.1
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	3.2	2.8	2.4	1.1
	10th Grade	3.2	2.8	2.4	1.1
	12th Grade	3.2	2.8	2.4	1.1
Female	8th Grade	3.2	2.8	2.0	1.1
	10th Grade	3.2	2.8	2.0	1.1
	12th Grade	3.2	2.8	2.0	1.1
College Plans:					
None or under 4 yrs.	8th Grade	2.0	1.9	1.4	1.1
	10th Grade	2.0	1.9	1.4	1.1
	12th Grade	2.0	1.9	1.4	1.1
Complete 4 years	8th Grade	4.2	3.2	2.4	1.1
	10th Grade	4.2	3.2	2.4	1.1
	12th Grade	4.2	3.2	2.4	1.1
Parental Education:					
Any stratum	8th Grade	2.1	1.9	1.5	1.1
	10th Grade	2.1	1.9	1.5	1.1
	12th Grade	2.1	1.9	1.5	1.1
Racial/Ethnic Group:					
White	8th Grade	4.2	3.8	2.8	1.2
	10th Grade	4.2	3.8	2.8	1.2
	12th Grade	4.2	3.8	2.8	1.2
Black	8th Grade	1.4	1.4	1.3	1.2
	10th Grade	1.4	1.4	1.3	1.2
	12th Grade	1.4	1.4	1.3	1.2
Hispanic	8th Grade	6.1	3.3	2.3	1.2
	10th Grade	6.1	3.3	2.3	1.2
	12th Grade	6.1	3.3	2.3	1.2

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-1d
Design Effects for 1-Year Trends in Prevalence of Use

		NITRITES, PCP, CRACK COCAINE, HEROIN WITH AND WITHOUT A NEEDLE, METHAMPHETAMINE, ICE, METHAQUALONE, ROHYPNOL, GHB, KETAMINE, AND STEROIDS			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	1.9	1.3	1.3	1.1
	10th Grade	1.9	1.3	1.3	1.1
	12th Grade	1.9	1.3	1.3	1.1
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	1.3	1.3	1.3	1.1
	10th Grade	1.3	1.3	1.3	1.1
	12th Grade	1.3	1.3	1.3	1.1
Female	8th Grade	1.9	1.5	1.3	1.1
	10th Grade	1.9	1.5	1.3	1.1
	12th Grade	1.9	1.5	1.3	1.1
College Plans:					
None or under 4 yrs.	8th Grade	1.4	1.4	1.4	1.1
	10th Grade	1.4	1.4	1.4	1.1
	12th Grade	1.4	1.4	1.4	1.1
Complete 4 years	8th Grade	1.5	1.3	1.1	1.1
	10th Grade	1.5	1.3	1.1	1.1
	12th Grade	1.5	1.3	1.1	1.1
Parental Education:					
Any stratum	8th Grade	1.3	1.3	1.3	1.1
	10th Grade	1.3	1.3	1.3	1.1
	12th Grade	1.3	1.3	1.3	1.1
Racial/Ethnic Group:					
White	8th Grade	1.6	1.5	1.4	1.2
	10th Grade	1.6	1.5	1.4	1.2
	12th Grade	1.6	1.5	1.4	1.2
Black	8th Grade	1.8	1.8	1.8	1.2
	10th Grade	1.8	1.8	1.8	1.2
	12th Grade	1.8	1.8	1.8	1.2
Hispanic	8th Grade	2.0	1.6	1.5	1.2
	10th Grade	2.0	1.6	1.5	1.2
	12th Grade	2.0	1.6	1.5	1.2

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-1e
Design Effects for 1-Year Trends in Prevalence of Use

		HALLUCINOGENS OTHER THAN LSD, MDMA (ECSTASY), NARCOTICS OTHER THAN HEROIN, SEDATIVES, BARBITURATES, TRANQUILIZERS, AND BIDIS			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	2.4	2.2	1.5	1.1
	10th Grade	2.4	2.2	1.5	1.1
	12th Grade	2.4	2.2	1.5	1.1
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.1	2.1	1.6	1.1
	10th Grade	2.1	2.1	1.6	1.1
	12th Grade	2.1	2.1	1.6	1.1
Female	8th Grade	2.0	1.6	1.3	1.1
	10th Grade	2.0	1.6	1.3	1.1
	12th Grade	2.0	1.6	1.3	1.1
College Plans:					
None or under 4 yrs.	8th Grade	2.0	1.6	1.3	1.1
	10th Grade	2.0	1.6	1.3	1.1
	12th Grade	2.0	1.6	1.3	1.1
Complete 4 years	8th Grade	2.0	1.6	1.3	1.1
	10th Grade	2.0	1.6	1.3	1.1
	12th Grade	2.0	1.6	1.3	1.1
Parental Education:					
Any stratum	8th Grade	2.0	1.6	1.3	1.1
	10th Grade	2.0	1.6	1.3	1.1
	12th Grade	2.0	1.6	1.3	1.1
Racial/Ethnic Group:					
White	8th Grade	2.5	2.5	1.9	1.2
	10th Grade	2.5	2.5	1.9	1.2
	12th Grade	2.5	2.5	1.9	1.2
Black	8th Grade	1.5	1.5	1.4	1.2
	10th Grade	1.5	1.5	1.4	1.2
	12th Grade	1.5	1.5	1.4	1.2
Hispanic	8th Grade	1.6	1.4	1.3	1.2
	10th Grade	1.6	1.4	1.3	1.2
	12th Grade	1.6	1.4	1.3	1.2

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-1f
Design Effects for 1-Year Trends in Prevalence of Use

		INHALANTS AND AMPHETAMINES (UNADJUSTED AND ADJUSTED)			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	3.5	3.0	2.1	1.1
	10th Grade	3.5	3.0	2.1	1.1
	12th Grade	3.5	3.0	2.1	1.1
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.7	2.4	1.9	1.1
	10th Grade	2.7	2.4	1.9	1.1
	12th Grade	2.7	2.4	1.9	1.1
Female	8th Grade	2.7	2.7	1.9	1.1
	10th Grade	2.7	2.7	1.9	1.1
	12th Grade	2.7	2.7	1.9	1.1
College Plans:					
None or under 4 yrs.	8th Grade	1.9	1.5	1.3	1.1
	10th Grade	1.9	1.5	1.3	1.1
	12th Grade	1.9	1.5	1.3	1.1
Complete 4 years	8th Grade	3.0	2.7	2.0	1.1
	10th Grade	3.0	2.7	2.0	1.1
	12th Grade	3.0	2.7	2.0	1.1
Parental Education:					
Any stratum	8th Grade	2.0	1.9	1.4	1.1
	10th Grade	2.0	1.9	1.4	1.1
	12th Grade	2.0	1.9	1.4	1.1
Racial/Ethnic Group:					
White	8th Grade	3.3	3.2	1.8	1.2
	10th Grade	3.3	3.2	1.8	1.2
	12th Grade	3.3	3.2	1.8	1.2
Black	8th Grade	3.6	2.4	1.8	1.2
	10th Grade	3.6	2.4	1.8	1.2
	12th Grade	3.6	2.4	1.8	1.2
Hispanic	8th Grade	2.6	2.3	1.5	1.2
	10th Grade	2.6	2.3	1.5	1.2
	12th Grade	2.6	2.3	1.5	1.2

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-1g
Design Effects for 1-Year Trends in Prevalence of Use

		ALCOHOL AND BEEN DRUNK		CIGARETTES AND SMOKELESS TOBACCO	
		Lifetime, Past 12 Months, Past 30 Days, 5+/2 Weeks	Daily	Lifetime, Past 30 Days, Daily	Half-pack or More per Day
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	3.7	1.3	3.8	3.0
	10th Grade	3.7	1.3	3.8	3.0
	12th Grade	3.7	1.3	3.8	3.0
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.4	1.3	2.3	2.0
	10th Grade	2.4	1.3	2.3	2.0
	12th Grade	2.4	1.3	2.3	2.0
Female	8th Grade	3.1	1.3	3.6	2.6
	10th Grade	3.1	1.3	3.6	2.6
	12th Grade	3.1	1.3	3.6	2.6
College Plans:					
None or under 4 yrs.	8th Grade	2.1	1.3	2.0	2.0
	10th Grade	2.1	1.3	2.0	2.0
	12th Grade	2.1	1.3	2.0	2.0
Complete 4 years	8th Grade	3.2	1.3	3.2	2.3
	10th Grade	3.2	1.3	3.2	2.3
	12th Grade	3.2	1.3	3.2	2.3
Parental Education:					
Any stratum	8th Grade	2.0	1.3	2.1	1.9
	10th Grade	2.0	1.3	2.1	1.9
	12th Grade	2.0	1.3	2.1	1.9
Racial/Ethnic Group:					
White	8th Grade	3.6	1.4	3.7	2.6
	10th Grade	3.6	1.4	3.7	2.6
	12th Grade	3.6	1.4	3.7	2.6
Black	8th Grade	4.5	1.4	2.4	1.4
	10th Grade	4.5	1.4	2.4	1.4
	12th Grade	4.5	1.4	2.4	1.4
Hispanic	8th Grade	3.0	1.4	2.7	1.9
	10th Grade	3.0	1.4	2.7	1.9
	12th Grade	3.0	1.4	2.7	1.9

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-2a
Design Effects for (a) Prevalence of Use or (b) a Change in Prevalence of Use Across Nonadjacent Years

		INDEX OF ANY ILLICIT DRUG OTHER THAN MARIJUANA			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West); Any* Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	5.6	4.6	3.3	1.3
	10th Grade	6.2	5.0	3.4	1.4
	12th Grade	7.2	6.4	4.6	2.0
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	3.6	3.2	2.6	1.4
	10th Grade	4.1	3.5	3.0	1.4
	12th Grade	4.4	3.7	3.0	2.0
Female	8th Grade	4.2	3.7	2.4	1.3
	10th Grade	4.5	3.9	2.6	1.2
	12th Grade	4.9	4.6	3.6	1.9
College Plans:					
None or under 4 yrs.	8th Grade	2.3	2.2	1.8	1.3
	10th Grade	2.7	2.5	2.2	1.5
	12th Grade	2.4	2.3	1.9	1.6
Complete 4 years	8th Grade	4.8	3.6	2.8	1.4
	10th Grade	5.9	4.5	3.2	1.2
	12th Grade	6.4	5.3	4.0	2.1
Parental Education:					
Any stratum	8th Grade	2.4	2.2	1.8	1.2
	10th Grade	2.6	2.3	2.0	1.3
	12th Grade	2.9	2.6	2.0	1.5
Racial/Ethnic Group:					
White	8th Grade	5.0	4.8	3.6	1.8
	10th Grade	6.1	5.3	3.8	1.9
	12th Grade	5.2	5.0	3.7	2.5
Black	8th Grade	3.3	2.5	1.8	1.5
	10th Grade	3.8	3.3	2.4	1.6
	12th Grade	4.6	4.1	3.8	2.0
Hispanic	8th Grade	4.7	3.4	2.5	1.8
	10th Grade	5.7	3.6	2.3	1.6
	12th Grade	8.6	7.2	3.8	2.4

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-2b
Design Effects for (a) Prevalence of Use or (b) a Change in Prevalence of Use Across Nonadjacent Years

		INDEX OF ANY ILLICIT DRUG, INDEX OF ANY ILLICIT DRUG INCLUDING INHALANTS, AND MARIJUANA			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	5.8	4.8	4.3	1.6
	10th Grade	7.5	6.2	4.7	1.7
	12th Grade	10.7	10.2	8.1	3.6
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	3.0	3.0	3.0	1.8
	10th Grade	4.6	4.0	4.0	1.7
	12th Grade	5.4	4.6	4.0	3.5
Female	8th Grade	4.6	4.0	2.9	1.4
	10th Grade	5.7	4.6	3.5	1.1
	12th Grade	6.8	6.7	6.5	3.3
College Plans:					
None or under 4 yrs.	8th Grade	2.7	2.7	2.2	1.5
	10th Grade	3.7	3.7	3.4	2.2
	12th Grade	3.0	3.0	2.5	2.5
Complete 4 years	8th Grade	4.5	3.0	3.0	1.7
	10th Grade	7.6	5.7	4.3	1.1
	12th Grade	9.3	8.0	6.6	3.9
Parental Education:					
Any stratum	8th Grade	2.5	2.4	2.0	1.2
	10th Grade	3.1	2.8	2.6	1.6
	12th Grade	4.0	3.6	2.8	2.0
Racial/Ethnic Group:					
White	8th Grade	5.6	5.5	5.1	2.4
	10th Grade	9.0	7.3	5.6	2.6
	12th Grade	6.3	6.3	5.3	4.6
Black	8th Grade	3.8	2.6	1.6	1.4
	10th Grade	5.0	5.0	3.3	1.9
	12th Grade	7.5	7.5	7.5	3.1
Hispanic	8th Grade	3.3	3.3	2.6	2.5
	10th Grade	6.1	3.8	2.0	1.9
	12th Grade	15.0	14.6	6.6	4.3

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-2c
Design Effects for (a) Prevalence of Use or (b) a Change in Prevalence of Use Across Nonadjacent Years

		HALLUCINOGENS (UNADJUSTED AND ADJUSTED), LSD, COCAINE, AND OTHER COCAINE			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	6.2	4.9	3.2	1.2
	10th Grade	6.2	4.9	3.2	1.2
	12th Grade	6.2	4.9	3.2	1.2
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	4.3	3.7	2.9	1.2
	10th Grade	4.3	3.7	2.9	1.2
	12th Grade	4.3	3.7	2.9	1.2
Female	8th Grade	4.4	3.6	2.2	1.2
	10th Grade	4.4	3.6	2.2	1.2
	12th Grade	4.4	3.6	2.2	1.2
College Plans:					
None or under 4 yrs.	8th Grade	2.2	2.0	1.6	1.2
	10th Grade	2.2	2.0	1.6	1.2
	12th Grade	2.2	2.0	1.6	1.2
Complete 4 years	8th Grade	6.0	4.4	3.0	1.2
	10th Grade	6.0	4.4	3.0	1.2
	12th Grade	6.0	4.4	3.0	1.2
Parental Education:					
Any stratum	8th Grade	2.4	2.1	1.7	1.2
	10th Grade	2.4	2.1	1.7	1.2
	12th Grade	2.4	2.1	1.7	1.2
Racial/Ethnic Group:					
White	8th Grade	5.3	4.8	3.5	1.5
	10th Grade	5.3	4.8	3.5	1.5
	12th Grade	5.3	4.8	3.5	1.5
Black	8th Grade	1.8	1.8	1.6	1.5
	10th Grade	1.8	1.8	1.6	1.5
	12th Grade	1.8	1.8	1.6	1.5
Hispanic	8th Grade	7.6	4.1	2.9	1.5
	10th Grade	7.6	4.1	2.9	1.5
	12th Grade	7.6	4.1	2.9	1.5

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-2d
Design Effects for (a) Prevalence of Use or (b) a Change in Prevalence of Use Across Nonadjacent Years

		NITRITES, PCP, CRACK COCAINE, HEROIN WITH AND WITHOUT A NEEDLE, METHAMPHETAMINE, ICE, METHAQUALONE, ROHYPNOL, GHB, KETAMINE, AND STEROIDS			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	2.0	1.5	1.5	1.2
	10th Grade	2.0	1.5	1.5	1.2
	12th Grade	2.0	1.5	1.5	1.2
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	1.4	1.4	1.4	1.2
	10th Grade	1.4	1.4	1.4	1.2
	12th Grade	1.4	1.4	1.4	1.2
Female	8th Grade	2.1	1.7	1.5	1.2
	10th Grade	2.1	1.7	1.5	1.2
	12th Grade	2.1	1.7	1.5	1.2
College Plans:					
None or under 4 yrs.	8th Grade	1.6	1.6	1.6	1.2
	10th Grade	1.6	1.6	1.6	1.2
	12th Grade	1.6	1.6	1.6	1.2
Complete 4 years	8th Grade	1.7	1.4	1.2	1.2
	10th Grade	1.7	1.4	1.2	1.2
	12th Grade	1.7	1.4	1.2	1.2
Parental Education:					
Any stratum	8th Grade	1.4	1.4	1.4	1.2
	10th Grade	1.4	1.4	1.4	1.2
	12th Grade	1.4	1.4	1.4	1.2
Racial/Ethnic Group:					
White	8th Grade	2.0	1.9	1.8	1.5
	10th Grade	2.0	1.9	1.8	1.5
	12th Grade	2.0	1.9	1.8	1.5
Black	8th Grade	2.3	2.3	2.3	1.5
	10th Grade	2.3	2.3	2.3	1.5
	12th Grade	2.3	2.3	2.3	1.5
Hispanic	8th Grade	2.5	2.0	1.9	1.5
	10th Grade	2.5	2.0	1.9	1.5
	12th Grade	2.5	2.0	1.9	1.5

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-2e
Design Effects for (a) Prevalence of Use or (b) a Change in Prevalence of Use Across Nonadjacent Years

		HALLUCINOGENS OTHER THAN LSD, MDMA (ECSTASY), NARCOTICS OTHER THAN HEROIN, SEDATIVES, BARBITURATES, TRANQUILIZERS, AND BIDIS			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	2.9	2.6	1.7	1.2
	10th Grade	2.9	2.6	1.7	1.2
	12th Grade	2.9	2.6	1.7	1.2
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.4	2.4	1.9	1.2
	10th Grade	2.4	2.4	1.9	1.2
	12th Grade	2.4	2.4	1.9	1.2
Female	8th Grade	2.2	1.9	1.4	1.2
	10th Grade	2.2	1.9	1.4	1.2
	12th Grade	2.2	1.9	1.4	1.2
College Plans:					
None or under 4 yrs.	8th Grade	2.2	1.9	1.4	1.2
	10th Grade	2.2	1.9	1.4	1.2
	12th Grade	2.2	1.9	1.4	1.2
Complete 4 years	8th Grade	2.2	1.9	1.4	1.2
	10th Grade	2.2	1.9	1.4	1.2
	12th Grade	2.2	1.9	1.4	1.2
Parental Education:					
Any stratum	8th Grade	2.2	1.9	1.4	1.2
	10th Grade	2.2	1.9	1.4	1.2
	12th Grade	2.2	1.9	1.4	1.2
Racial/Ethnic Group:					
White	8th Grade	3.1	3.1	2.4	1.5
	10th Grade	3.1	3.1	2.4	1.5
	12th Grade	3.1	3.1	2.4	1.5
Black	8th Grade	1.9	1.9	1.8	1.5
	10th Grade	1.9	1.9	1.8	1.5
	12th Grade	1.9	1.9	1.8	1.5
Hispanic	8th Grade	2.0	1.8	1.6	1.5
	10th Grade	2.0	1.8	1.6	1.5
	12th Grade	2.0	1.8	1.6	1.5

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-2f
Design Effects for (a) Prevalence of Use or (b) a Change in Prevalence of Use Across Nonadjacent Years

			INHALANTS AND AMPHETAMINES (UNADJUSTED AND ADJUSTED)			
			Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:						
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*						
		8th Grade	4.8	4.0	2.4	1.2
		10th Grade	4.8	4.0	2.4	1.2
		12th Grade	4.8	4.0	2.4	1.2
CROSS-CLASS GROUPS:						
Gender:						
	Male	8th Grade	3.4	2.9	2.0	1.2
		10th Grade	3.4	2.9	2.0	1.2
		12th Grade	3.4	2.9	2.0	1.2
	Female	8th Grade	3.5	3.4	2.1	1.2
		10th Grade	3.5	3.4	2.1	1.2
		12th Grade	3.5	3.4	2.1	1.2
College Plans:						
	None or under 4 yrs.	8th Grade	2.1	1.8	1.5	1.2
		10th Grade	2.1	1.8	1.5	1.2
		12th Grade	2.1	1.8	1.5	1.2
	Complete 4 years	8th Grade	4.0	3.5	2.3	1.2
		10th Grade	4.0	3.5	2.3	1.2
		12th Grade	4.0	3.5	2.3	1.2
Parental Education:						
	Any stratum	8th Grade	2.3	2.1	1.6	1.2
		10th Grade	2.3	2.1	1.6	1.2
		12th Grade	2.3	2.1	1.6	1.2
Racial/Ethnic Group:						
	White	8th Grade	4.1	4.0	2.3	1.5
		10th Grade	4.1	4.0	2.3	1.5
		12th Grade	4.1	4.0	2.3	1.5
	Black	8th Grade	4.5	3.0	2.3	1.5
		10th Grade	4.5	3.0	2.3	1.5
		12th Grade	4.5	3.0	2.3	1.5
	Hispanic	8th Grade	3.3	2.9	1.9	1.5
		10th Grade	3.3	2.9	1.9	1.5
		12th Grade	3.3	2.9	1.9	1.5

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-2g
Design Effects for (a) Prevalence of Use or (b) a Change in Prevalence of Use Across Nonadjacent Years

		ALCOHOL AND BEEN DRUNK		CIGARETTES AND SMOKELESS TOBACCO	
		Lifetime, Past 12 Months, Past 30 Days, 5+/2 Weeks	Daily	Lifetime, Past 30 Days, Daily	Half-pack or More per Day
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	5.2	1.4	5.4	3.9
	10th Grade	5.2	1.4	5.4	3.9
	12th Grade	5.2	1.4	5.4	3.9
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.9	1.4	2.8	2.2
	10th Grade	2.9	1.4	2.8	2.2
	12th Grade	2.9	1.4	2.8	2.2
Female	8th Grade	4.2	1.4	5.1	3.3
	10th Grade	4.2	1.4	5.1	3.3
	12th Grade	4.2	1.4	5.1	3.3
College Plans:					
None or under 4 yrs.	8th Grade	2.5	1.4	2.3	2.2
	10th Grade	2.5	1.4	2.3	2.2
	12th Grade	2.5	1.4	2.3	2.2
Complete 4 years	8th Grade	4.3	1.4	4.3	2.7
	10th Grade	4.3	1.4	4.3	2.7
	12th Grade	4.3	1.4	4.3	2.7
Parental Education:					
Any stratum	8th Grade	2.3	1.4	2.4	2.0
	10th Grade	2.3	1.4	2.4	2.0
	12th Grade	2.3	1.4	2.4	2.0
Racial/Ethnic Group:					
White	8th Grade	4.5	1.8	4.6	3.3
	10th Grade	4.5	1.8	4.6	3.3
	12th Grade	4.5	1.8	4.6	3.3
Black	8th Grade	5.6	1.8	3.0	1.8
	10th Grade	5.6	1.8	3.0	1.8
	12th Grade	5.6	1.8	3.0	1.8
Hispanic	8th Grade	3.8	1.8	3.4	2.4
	10th Grade	3.8	1.8	3.4	2.4
	12th Grade	3.8	1.8	3.4	2.4

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-3a
Design Effects for Subgroup Comparisons within Any Single Year

		INDEX OF ANY ILLICIT DRUG OTHER THAN MARIJUANA			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	5.6	4.6	3.3	1.3
	10th Grade	6.2	5.0	3.4	1.4
	12th Grade	7.2	6.4	4.6	2.0
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.8	2.5	2.2	1.3
	10th Grade	3.1	2.7	2.4	1.2
	12th Grade	3.2	2.9	2.4	1.7
Female	8th Grade	3.1	2.8	2.1	1.2
	10th Grade	3.3	2.9	2.2	1.1
	12th Grade	3.5	3.3	2.8	1.6
College Plans:					
None or under 4 yrs.	8th Grade	2.0	1.9	1.6	1.2
	10th Grade	2.2	2.1	1.8	1.4
	12th Grade	2.1	1.9	1.6	1.5
Complete 4 years	8th Grade	3.5	2.8	2.3	1.2
	10th Grade	4.1	3.3	2.5	1.1
	12th Grade	4.4	3.8	3.0	1.7
Parental Education:					
Any stratum	8th Grade	2.1	2.0	1.6	1.1
	10th Grade	2.2	2.0	1.7	1.2
	12th Grade	2.4	2.2	1.7	1.4
Racial/Ethnic Group:					
White	8th Grade	3.6	3.4	2.8	1.8
	10th Grade	4.2	3.8	2.9	1.9
	12th Grade	3.7	3.6	2.8	2.2
Black	8th Grade	2.6	2.5	1.8	1.5
	10th Grade	2.9	2.6	2.4	1.6
	12th Grade	3.4	3.1	2.9	2.0
Hispanic	8th Grade	3.4	2.7	2.5	1.8
	10th Grade	4.0	2.8	2.3	1.6
	12th Grade	5.7	4.9	2.9	2.4

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-3b
Design Effects for Subgroup Comparisons within Any Single Year

		INDEX OF ANY ILLICIT DRUG, INDEX OF ANY ILLICIT DRUG INCLUDING INHALANTS, AND MARIJUANA			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	5.8	4.8	4.3	1.6
	10th Grade	7.5	6.2	4.7	1.7
	12th Grade	10.7	10.2	8.1	3.6
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.4	2.4	2.4	1.5
	10th Grade	3.4	3.0	3.0	1.5
	12th Grade	3.8	3.4	3.0	2.7
Female	8th Grade	3.4	3.0	2.4	1.3
	10th Grade	4.0	3.4	2.7	1.1
	12th Grade	4.6	4.6	4.5	2.6
College Plans:					
None or under 4 yrs.	8th Grade	2.3	2.3	2.0	1.3
	10th Grade	2.8	2.8	2.7	2.0
	12th Grade	2.4	2.4	2.1	2.1
Complete 4 years	8th Grade	3.3	2.4	2.4	1.5
	10th Grade	5.1	4.0	3.2	1.1
	12th Grade	6.1	5.3	4.5	3.0
Parental Education:					
Any stratum	8th Grade	2.1	2.1	1.9	1.1
	10th Grade	2.5	2.3	2.2	1.4
	12th Grade	3.0	2.8	2.3	1.9
Racial/Ethnic Group:					
White	8th Grade	4.0	3.9	3.7	2.1
	10th Grade	5.9	4.9	4.0	2.2
	12th Grade	4.3	4.3	3.7	3.4
Black	8th Grade	2.9	2.2	1.6	1.4
	10th Grade	3.6	3.6	2.6	1.9
	12th Grade	5.0	5.0	5.0	2.5
Hispanic	8th Grade	2.6	2.6	2.2	2.1
	10th Grade	4.2	2.9	2.0	1.9
	12th Grade	9.4	9.2	4.5	3.2

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-3c
Design Effects for Subgroup Comparisons within Any Single Year

		HALLUCINOGENS (UNADJUSTED AND ADJUSTED), LSD, COCAINE, AND OTHER COCAINE			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	6.2	4.9	3.2	1.2
	10th Grade	6.2	4.9	3.2	1.2
	12th Grade	6.2	4.9	3.2	1.2
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	3.2	2.8	2.4	1.1
	10th Grade	3.2	2.8	2.4	1.1
	12th Grade	3.2	2.8	2.4	1.1
Female	8th Grade	3.2	2.8	2.0	1.1
	10th Grade	3.2	2.8	2.0	1.1
	12th Grade	3.2	2.8	2.0	1.1
College Plans:					
None or under 4 yrs.	8th Grade	2.0	1.9	1.4	1.1
	10th Grade	2.0	1.9	1.4	1.1
	12th Grade	2.0	1.9	1.4	1.1
Complete 4 years	8th Grade	4.2	3.2	2.4	1.1
	10th Grade	4.2	3.2	2.4	1.1
	12th Grade	4.2	3.2	2.4	1.1
Parental Education:					
Any stratum	8th Grade	2.1	1.9	1.5	1.1
	10th Grade	2.1	1.9	1.5	1.1
	12th Grade	2.1	1.9	1.5	1.1
Racial/Ethnic Group:					
White	8th Grade	3.7	3.4	2.7	1.5
	10th Grade	3.7	3.4	2.7	1.5
	12th Grade	3.7	3.4	2.7	1.5
Black	8th Grade	1.8	1.8	1.6	1.5
	10th Grade	1.8	1.8	1.6	1.5
	12th Grade	1.8	1.8	1.6	1.5
Hispanic	8th Grade	5.1	3.1	2.4	1.5
	10th Grade	5.1	3.1	2.4	1.5
	12th Grade	5.1	3.1	2.4	1.5

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-3d
Design Effects for Subgroup Comparisons within Any Single Year

		NITRITES, PCP, CRACK COCAINE, HEROIN WITH AND WITHOUT A NEEDLE, METHAMPHETAMINE, ICE, METHAQUALONE, ROHYPNOL, GHB, KETAMINE, AND STEROIDS			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	2.0	1.5	1.5	1.2
	10th Grade	2.0	1.5	1.5	1.2
	12th Grade	2.0	1.5	1.5	1.2
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	1.3	1.3	1.3	1.1
	10th Grade	1.3	1.3	1.3	1.1
	12th Grade	1.3	1.3	1.3	1.1
Female	8th Grade	1.9	1.5	1.3	1.1
	10th Grade	1.9	1.5	1.3	1.1
	12th Grade	1.9	1.5	1.3	1.1
College Plans:					
None or under 4 yrs.	8th Grade	1.4	1.4	1.4	1.1
	10th Grade	1.4	1.4	1.4	1.1
	12th Grade	1.4	1.4	1.4	1.1
Complete 4 years	8th Grade	1.5	1.3	1.1	1.1
	10th Grade	1.5	1.3	1.1	1.1
	12th Grade	1.5	1.3	1.1	1.1
Parental Education:					
Any stratum	8th Grade	1.3	1.3	1.3	1.1
	10th Grade	1.3	1.3	1.3	1.1
	12th Grade	1.3	1.3	1.3	1.1
Racial/Ethnic Group:					
White	8th Grade	2.0	1.9	1.8	1.5
	10th Grade	2.0	1.9	1.8	1.5
	12th Grade	2.0	1.9	1.8	1.5
Black	8th Grade	2.0	2.0	2.0	1.5
	10th Grade	2.0	2.0	2.0	1.5
	12th Grade	2.0	2.0	2.0	1.5
Hispanic	8th Grade	2.1	2.0	1.9	1.5
	10th Grade	2.1	2.0	1.9	1.5
	12th Grade	2.1	2.0	1.9	1.5

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-3e
Design Effects for Subgroup Comparisons within Any Single Year

		HALLUCINOGENS OTHER THAN LSD, MDMA (ECSTASY), NARCOTICS OTHER THAN HEROIN, SEDATIVES, BARBITURATES, TRANQUILIZERS, AND BIDIS			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	2.9	2.6	1.7	1.2
	10th Grade	2.9	2.6	1.7	1.2
	12th Grade	2.9	2.6	1.7	1.2
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.1	2.1	1.6	1.1
	10th Grade	2.1	2.1	1.6	1.1
	12th Grade	2.1	2.1	1.6	1.1
Female	8th Grade	2.0	1.6	1.3	1.1
	10th Grade	2.0	1.6	1.3	1.1
	12th Grade	2.0	1.6	1.3	1.1
College Plans:					
None or under 4 yrs.	8th Grade	2.0	1.6	1.3	1.1
	10th Grade	2.0	1.6	1.3	1.1
	12th Grade	2.0	1.6	1.3	1.1
Complete 4 years	8th Grade	2.0	1.6	1.3	1.1
	10th Grade	2.0	1.6	1.3	1.1
	12th Grade	2.0	1.6	1.3	1.1
Parental Education:					
Any stratum	8th Grade	2.0	1.6	1.3	1.1
	10th Grade	2.0	1.6	1.3	1.1
	12th Grade	2.0	1.6	1.3	1.1
Racial/Ethnic Group:					
White	8th Grade	2.5	2.5	2.1	1.5
	10th Grade	2.5	2.5	2.1	1.5
	12th Grade	2.5	2.5	2.1	1.5
Black	8th Grade	1.9	1.9	1.8	1.5
	10th Grade	1.9	1.9	1.8	1.5
	12th Grade	1.9	1.9	1.8	1.5
Hispanic	8th Grade	2.0	1.8	1.6	1.5
	10th Grade	2.0	1.8	1.6	1.5
	12th Grade	2.0	1.8	1.6	1.5

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-3f
Design Effects for Subgroup Comparisons within Any Single Year

		INHALANTS AND AMPHETAMINES (UNADJUSTED AND ADJUSTED)			
		Lifetime	Past 12 Months	Past 30 Days	Daily
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West)*; Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	4.8	4.0	2.4	1.2
	10th Grade	4.8	4.0	2.4	1.2
	12th Grade	4.8	4.0	2.4	1.2
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.7	2.4	1.9	1.1
	10th Grade	2.7	2.4	1.9	1.1
	12th Grade	2.7	2.4	1.9	1.1
Female	8th Grade	2.7	2.7	1.9	1.1
	10th Grade	2.7	2.7	1.9	1.1
	12th Grade	2.7	2.7	1.9	1.1
College Plans:					
None or under 4 yrs.	8th Grade	1.9	1.5	1.3	1.1
	10th Grade	1.9	1.5	1.3	1.1
	12th Grade	1.9	1.5	1.3	1.1
Complete 4 years	8th Grade	3.0	2.7	2.0	1.1
	10th Grade	3.0	2.7	2.0	1.1
	12th Grade	3.0	2.7	2.0	1.1
Parental Education:					
Any stratum	8th Grade	2.0	1.9	1.4	1.1
	10th Grade	2.0	1.9	1.4	1.1
	12th Grade	2.0	1.9	1.4	1.1
Racial/Ethnic Group:					
White	8th Grade	3.1	3.0	2.0	1.5
	10th Grade	3.1	3.0	2.0	1.5
	12th Grade	3.1	3.0	2.0	1.5
Black	8th Grade	3.3	2.4	2.0	1.5
	10th Grade	3.3	2.4	2.0	1.5
	12th Grade	3.3	2.4	2.0	1.5
Hispanic	8th Grade	2.6	2.4	1.9	1.5
	10th Grade	2.6	2.4	1.9	1.5
	12th Grade	2.6	2.4	1.9	1.5

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE C-3g
Design Effects for Subgroup Comparisons within Any Single Year

		ALCOHOL AND BEEN DRUNK		CIGARETTES AND SMOKELESS TOBACCO	
		Lifetime, Past 12 Months, Past 30 Days, 5+/2 Weeks	Daily	Lifetime, Past 30 Days, Daily	Half-pack or More per Day
SEGREGATED GROUPS:					
Total Sample: Any Region *(Northeast, North Central, South, and West);* Any Population Density Stratum *(Large MSA, Other MSA, and Non-MSA)*					
	8th Grade	5.2	1.4	5.4	3.9
	10th Grade	5.2	1.4	5.4	3.9
	12th Grade	5.2	1.4	5.4	3.9
CROSS-CLASS GROUPS:					
Gender:					
Male	8th Grade	2.4	1.3	2.3	2.0
	10th Grade	2.4	1.3	2.3	2.0
	12th Grade	2.4	1.3	2.3	2.0
Female	8th Grade	3.1	1.3	3.6	2.6
	10th Grade	3.1	1.3	3.6	2.6
	12th Grade	3.1	1.3	3.6	2.6
College Plans:					
None or under 4 yrs.	8th Grade	2.1	1.3	2.0	2.0
	10th Grade	2.1	1.3	2.0	2.0
	12th Grade	2.1	1.3	2.0	2.0
Complete 4 years	8th Grade	3.2	1.3	3.2	2.3
	10th Grade	3.2	1.3	3.2	2.3
	12th Grade	3.2	1.3	3.2	2.3
Parental Education:					
Any stratum	8th Grade	2.0	1.3	2.1	1.9
	10th Grade	2.0	1.3	2.1	1.9
	12th Grade	2.0	1.3	2.1	1.9
Racial/Ethnic Group:					
White	8th Grade	3.3	1.8	3.4	2.6
	10th Grade	3.3	1.8	3.4	2.6
	12th Grade	3.3	1.8	3.4	2.6
Black	8th Grade	4.0	1.8	2.4	1.8
	10th Grade	4.0	1.8	2.4	1.8
	12th Grade	4.0	1.8	2.4	1.8
Hispanic	8th Grade	2.9	1.8	2.7	2.1
	10th Grade	2.9	1.8	2.7	2.1
	12th Grade	2.9	1.8	2.7	2.1

SOURCE: The Monitoring the Future Study, the University of Michigan.

Appendix D

SUPPLEMENTAL TABLES FOR SECONDARY SCHOOL STUDENTS: TRENDS BY SUBGROUP

Trend data for the population subgroups discussed in this volume (defined by gender, college plans, region, community size, level of parental education, and racial/ethnic distinctions) are presented here for the major classes of licit and illicit drugs. Due to the sheer quantity of information such trend tables generate, we have selected the prevalence periods that seem most useful for understanding differences by subgroup. For most drugs, the trends are given only for annual prevalence. Other prevalence rates are provided for alcohol, cigarettes, and smokeless tobacco.

The subgroups are the standard ones used throughout this volume and are operationally defined in Appendix B. The reader should note that *two-year moving averages* are given for the three racial/ethnic groups described, in order to damp down random fluctuations in the trends for the minority groups, particularly among Hispanics. A footnote in each table describes the procedure.

For nearly all drugs there is one table presenting the subgroup trends for eighth- and tenth-grade students and a second table giving the longer-term trends for twelfth-grade students. However, for two of the drugs—barbiturates and narcotics other than heroin—the eighth- and tenth-grade data have been omitted, as they are throughout the volume, because we are less certain about the validity of the answers provided by the younger students. Specifically, we believe that they often fail to omit substances that should be omitted (i.e., non-prescription substances). A few other drugs are simply not asked of eighth and tenth graders; thus only twelfth-grade tables are presented.

Sample sizes should be taken into account when interpreting the importance of any changes observed, of course. They are provided in the last two pages of the appendix. However, the reader should be aware that the numbers given assume that all respondents were asked about the drug. Some of the drugs were not contained in all questionnaire forms, meaning that the subgroup and total Ns must be adjusted accordingly. The "Notes" section of the bottom of each table will indicate if only a fraction of the sample received the question.

Graphic presentations of the trends presented in these tables for the various demographic subgroups may be found in Occasional Paper No. 57, which is on the study's Web site (www.monitoringthefuture.org) under "Publications."[96] This graphic presentation, which is printed in color to help distinguish the various subgroups, is published in electronic form only, due to the high cost of printing a document of this length in color.

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[96] Johnston, L.D., O'Malley, P.M., and Bachman, J.G. (2002). *Demographic subgroup trends for various licit and illicit drugs, 1975-2001.* (Monitoring the Future Occasional Paper No. 57). Ann Arbor, MI: Institute for Social Research.

TABLE D-1

Any Illicit Drug:[a] Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

8th Grade

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*	
Total	11.3	12.9	15.1	18.5	21.4	23.6	22.1	21.0	20.5	19.5	19.5	0.0
Gender:												
Male	11.7	11.9	15.2	19.4	22.3	23.6	22.6	21.3	21.3	19.7	21.3	+1.6
Female	11.0	13.6	14.9	17.6	20.2	23.3	21.3	20.4	19.7	19.0	17.5	-1.6
College Plans:												
None or under 4 yrs.	22.8	25.6	30.7	34.6	38.4	40.3	39.6	41.3	39.9	38.9	38.5	-0.5
Complete 4 yrs.	9.5	10.9	12.8	16.3	19.1	21.0	19.9	18.4	18.0	17.1	17.2	+0.1
Region:												
Northeast	9.3	10.6	11.5	16.6	17.9	20.3	20.2	16.0	18.2	16.6	18.1	+1.5
North Central	11.2	13.0	13.9	17.2	23.3	24.7	22.3	21.9	22.6	20.6	18.0	-2.6
South	11.5	12.9	15.1	17.6	20.8	22.5	21.6	22.3	21.0	19.2	21.5	+2.2
West	13.3	15.0	21.1	23.7	23.3	27.1	24.4	22.0	19.2	21.0	18.9	-2.1
Population Density:												
Large MSA	10.5	12.0	13.1	16.2	15.2	23.4	20.5	19.8	19.1	18.1	16.4	-1.7
Other MSA	12.1	14.4	17.3	21.5	23.7	24.9	22.6	21.4	19.5	18.8	21.5	+2.8s
Non-MSA	10.8	11.2	12.9	14.0	20.3	21.4	22.9	21.6	24.3	22.7	19.1	-3.7s
Parental Education:[b]												
1.0-2.0 (Low)	19.5	18.5	20.8	26.1	29.8	26.7	29.5	30.4	30.2	30.9	29.9	-1.0
2.5-3.0	11.7	14.1	17.1	20.2	24.3	25.7	25.5	24.2	24.9	23.9	23.3	-0.5
3.5-4.0	11.6	13.6	15.4	19.7	23.4	26.2	23.8	21.8	21.0	20.1	21.5	+1.4
4.5-5.0	8.7	10.2	12.8	15.7	17.4	21.3	19.3	17.8	15.6	14.6	15.0	+0.4
5.5-6.0 (High)	10.2	10.1	11.8	14.9	17.7	19.8	16.8	17.1	15.8	15.0	13.4	-1.6
Race (2-year average):[c]												
White	—	11.8	13.6	15.7	19.2	22.4	23.0	21.5	19.9	19.1	19.0	-0.1
Black	—	7.9	9.3	13.0	15.8	17.5	18.1	18.1	18.6	18.3	16.7	-1.6
Hispanic	—	18.1	20.6	24.6	26.7	26.9	26.5	26.7	27.4	25.1	24.3	-0.8

10th Grade

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	21.4	20.4	24.7	30.0	33.3	37.5	38.5	35.0	35.9	36.4	37.2	+0.8
Gender:												
Male	21.6	20.4	25.1	31.8	33.7	38.8	40.1	35.3	37.0	39.4	39.6	+0.2
Female	21.1	20.1	24.0	28.0	32.5	36.3	36.8	34.7	34.6	33.5	35.0	+1.5
College Plans:												
None or under 4 yrs.	32.7	32.0	37.7	43.2	47.3	52.4	55.2	50.5	51.8	53.5	52.7	-0.9
Complete 4 yrs.	18.9	17.8	21.9	27.0	30.8	35.0	35.7	32.2	33.2	33.9	34.6	+0.8
Region:												
Northeast	21.8	19.0	26.9	29.6	32.4	37.7	37.8	39.0	38.2	34.0	37.4	+3.4
North Central	21.7	20.7	22.4	28.[illegible]	32.1	37.6	37.7	32.0	35.2	34.8	35.9	+1.1
South	19.2	17.9	23.3	29.2	33.2	37.9	38.[illegible]	35.1	34.8	36.0	36.7	+0.7
West	23.7	25.5	28.9	34.4	36.1	36.8	40.2	34.5	36.0	41.6	40.7	-1.0
Population Density:												
Large MSA	21.4	19.9	24.0	29.4	28.7	35.5	37.2	32.6	35.0	36.5	34.0	-2.6
Other MSA	22.0	20.8	25.1	32.7	35.5	40.0	40.0	36.9	37.3	36.6	39.0	+2.4
Non-MSA	20.4	20.1	24.4	24.7	30.7	35.1	37.2	34.5	33.9	35.8	37.4	+1.6
Parental Education:[b]												
1.0-2.0 (Low)	25.5	24.8	29.2	32.6	38.2	39.5	38.3	36.6	42.2	42.4	39.0	-3.4
2.5-3.0	23.0	21.3	25.4	31.1	37.1	39.1	40.8	39.1	39.4	39.2	41.6	+2.4
3.5-4.0	21.2	20.6	24.9	30.5	34.7	40.1	41.6	35.6	35.4	39.5	38.2	-1.3
4.5-5.0	19.4	18.7	22.5	28.1	30.9	35.5	36.3	31.9	32.8	32.6	35.1	+2.5
5.5-6.0 (High)	21.1	18.5	23.6	27.2	26.6	33.6	33.7	31.5	34.6	31.3	32.7	+1.4
Race (2-year average):[c]												
White	—	22.4	23.7	27.9	32.6	36.5	39.3	38.2	36.4	36.9	37.6	+0.8
Black	—	10.8	11.9	18.5	23.6	27.3	30.2	28.9	28.4	29.7	30.5	+0.7
Hispanic	—	23.6	26.3	30.3	34.3	40.0	41.3	38.1	38.4	39.3	38.8	-0.5

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of amphetamines or tranquilizers not under a doctor's orders. The use of other narcotics and barbiturates has been excluded, because 8th and 10th graders appear to overreport their use (perhaps because they include the use of nonprescription drugs in their answers).

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-2
Any Illicit Drug:[a,b] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*16200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	*15400*	*14300*	*15400*	*15200*	*13600*	*12800*	*12800*	
Total	45.0	48.1	51.1	53.8	54.2	53.1	52.1	49.4	47.4	45.8	46.3	44.3	41.7	38.5	35.4	32.5	29.4	27.1	31.0	35.8	39.0	40.2	42.4	41.4	42.1	40.9	41.4	+0.6
Gender:																												
Male	49.0	52.6	55.4	58.6	58.1	56.0	53.6	51.8	49.7	48.0	48.3	45.7	43.2	40.6	37.7	34.3	32.1	29.0	33.5	38.6	41.5	43.4	44.1	45.2	45.0	43.4	43.8	+0.4
Female	41.4	43.0	46.7	48.7	50.1	49.8	50.8	46.3	44.4	42.8	43.8	42.3	39.7	36.1	32.8	30.1	26.2	24.7	27.9	32.7	35.8	36.2	40.0	37.2	38.9	38.0	38.4	+0.5
College Plans:																												
None or under 4 years	—	50.6	54.3	55.5	56.8	56.5	55.8	53.4	50.8	50.3	50.1	48.6	46.7	42.0	40.9	37.8	33.9	33.5	34.9	40.8	44.1	46.2	48.8	47.3	47.9	45.1	46.2	+1.1
Complete 4 years	—	44.3	46.8	50.5	50.5	49.7	48.6	45.5	43.7	41.4	43.1	41.2	39.0	36.5	32.6	29.6	27.1	24.4	29.2	33.6	36.7	37.8	40.1	39.1	40.3	38.8	39.6	+0.8
Region:																												
Northeast	51.5	55.3	56.8	61.6	62.9	58.9	58.8	55.1	53.8	54.7	53.2	49.7	45.8	41.2	36.0	36.4	31.9	28.7	36.1	39.4	41.7	44.6	47.7	46.2	42.5	46.2	47.4	+1.2
North Central	45.5	47.6	51.9	54.6	55.0	53.1	53.4	50.3	46.9	42.4	45.7	45.0	42.7	39.7	38.7	34.0	31.3	27.8	30.8	36.5	40.9	40.9	40.6	38.1	42.1	38.9	42.0	+3.1
South	38.1	42.3	46.2	47.5	45.4	47.0	43.7	42.2	41.3	41.4	37.2	37.4	35.9	34.2	30.7	27.6	24.5	23.7	28.2	34.1	36.4	37.6	38.8	40.5	40.8	35.3	37.3	+2.0
West	48.3	49.7	50.0	53.2	56.4	55.8	55.5	51.7	50.7	49.1	53.3	47.8	45.7	41.8	39.5	34.4	32.6	31.1	31.8	34.7	38.2	39.1	45.9	43.1	44.2	47.4	41.9	-5.5
Population Density:																												
Large MSA	54.5	54.0	56.3	60.3	61.3	59.9	57.8	54.8	52.0	49.7	49.9	48.0	43.9	39.1	32.9	32.6	28.6	26.8	32.9	36.4	41.7	41.3	42.1	42.0	42.4	41.1	43.9	+2.7
Other MSA	45.0	47.8	52.4	54.5	55.2	53.8	52.1	49.8	49.6	46.7	46.5	45.1	42.7	40.5	36.3	33.5	33.0	27.3	31.7	37.8	39.0	42.3	44.2	42.1	43.3	42.6	41.0	-1.6
Non-MSA	38.8	43.7	45.2	47.4	47.6	47.0	47.6	44.0	41.1	41.4	43.0	40.0	37.6	34.3	36.0	30.1	23.8	27.0	28.4	31.6	35.9	35.4	39.2	39.3	39.9	37.5	39.4	+1.9
Parental Education:[c]																												
(Low)																												
1.0-2.0	—	43.4	45.3	47.7	50.2	49.5	48.1	44.3	45.1	42.7	42.8	38.1	35.4	35.8	28.4	26.6	28.7	27.7	29.5	32.9	37.7	36.6	40.3	38.9	40.9	41.3	38.8	-2.5
2.5-3.0	—	49.2	51.8	53.3	53.2	53.0	51.2	48.8	46.3	45.7	46.0	44.8	41.8	37.2	35.3	32.7	28.7	26.4	29.2	35.4	38.3	39.9	40.8	40.5	43.7	40.5	41.9	+1.4
3.5-4.0	—	48.9	53.1	55.1	56.1	54.2	52.8	50.8	46.5	47.6	47.2	45.6	42.2	38.6	37.7	33.8	29.6	28.1	31.6	36.4	38.8	40.4	42.0	42.9	42.9	41.6	42.7	+1.2
4.5-5.0	—	50.8	51.7	56.3	57.1	54.0	53.4	49.7	48.9	44.9	48.4	44.7	43.1	40.0	35.5	33.1	28.7	26.2	31.5	36.5	39.0	40.5	43.6	40.9	40.0	39.6	41.3	+1.7
5.5-6.0	—	51.3	51.8	59.1	54.3	55.0	54.8	48.5	46.1	45.5	44.5	44.5	43.5	40.6	36.3	33.3	31.9	26.8	33.4	35.7	40.7	40.6	44.0	41.8	42.3	41.1	40.1	-1.0
(High)																												
Race (2-year average):[d]																												
White	—	—	50.4	53.5	55.2	54.9	54.4	50.7	49.3	47.4	47.6	47.2	45.2	43.0	40.3	37.5	33.9	30.5	31.4	35.5	39.0	40.8	42.8	44.0	43.3	42.8	43.1	+0.4
Black	—	—	40.8	42.8	41.5	40.5	39.0	36.4	38.5	37.8	35.9	33.3	28.9	25.0	21.3	17.0	14.7	14.5	16.6	23.5	29.6	32.4	33.0	32.3	32.8	32.7	31.7	-1.0
Hispanic	—	—	49.9	49.5	48.4	48.1	46.8	42.7	42.0	43.1	43.9	42.8	38.9	35.4	30.1	26.4	29.4	30.3	28.8	31.2	35.5	38.0	41.2	41.9	42.5	44.8	41.8	-3.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders.

[b] Beginning in 1982 the question about amphetamine use was revised to get respondents to exclude the inappropriate reporting of nonprescription amphetamines. The prevalence of use rate dropped slightly as a result of this methodological change.

[c] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[d] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-3
Any Illicit Drug Other Than Marijuana:[a] Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[b]	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[b]	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	8.4	9.3	10.4	11.3	12.6	13.1	11.8	11.0	10.5	10.2	9.9	-0.2	12.2	12.3	13.9	15.2	17.5	18.4	18.2	16.6	16.7	16.7	16.8	+0.1
Gender:																								
Male	8.0	8.0	9.2	10.1	11.5	11.0	10.8	9.6	9.7	9.1	9.4	+0.4	11.2	11.1	13.4	14.1	15.8	17.2	17.2	15.6	15.9	16.7	15.7	-1.1
Female	8.8	10.4	11.5	12.3	13.5	14.7	12.6	12.1	11.2	10.9	10.5	-0.4	13.1	13.2	14.3	16.0	18.9	19.6	19.1	17.5	17.3	16.6	17.6	+1.0
College Plans:																								
None or under 4 yrs.	16.3	18.5	21.3	21.2	25.3	23.0	22.1	23.8	23.4	22.7	20.0	-2.7	19.6	20.2	23.1	24.0	27.5	29.5	29.6	27.8	27.3	27.7	28.1	+0.5
Complete 4 yrs.	7.2	8.0	8.9	9.9	10.9	11.6	10.6	9.4	9.0	8.7	8.9	+0.2	10.7	10.5	12.0	13.3	15.7	16.5	16.3	14.6	15.0	15.0	15.0	0.0
Region:																								
Northeast	6.8	6.6	8.2	10.3	10.7	11.3	9.5	8.5	8.5	8.0	6.6	-1.3	10.6	9.6	12.8	13.7	14.1	17.2	16.0	17.2	18.2	14.7	13.1	-1.6
North Central	8.6	10.4	9.4	10.2	14.0	14.3	12.5	10.5	11.9	11.2	10.0	-1.1	13.2	12.9	12.8	14.8	19.0	20.0	16.2	14.4	16.1	15.8	15.3	-0.5
South	8.6	9.7	11.0	11.7	12.5	12.6	11.8	12.5	11.2	10.3	12.6	+2.3	11.9	12.2	14.7	15.3	18.4	18.6	20.8	18.3	16.8	17.5	18.8	+1.3
West	9.3	9.8	13.4	12.7	12.7	14.0	13.0	11.1	9.3	10.5	8.0	-2.5	12.7	14.1	15.6	17.2	17.2	17.4	18.7	15.8	15.7	18.5	19.6	+1.2
Population Density:																								
Large MSA	8.0	8.1	8.8	9.8	8.7	12.3	9.9	8.9	8.4	8.5	6.8	-1.6	11.8	11.4	12.2	13.1	13.5	16.8	16.3	14.6	15.0	17.2	12.6	-4.6s
Other MSA	8.6	10.4	11.8	12.5	13.5	14.1	12.2	11.2	10.7	10.1	11.4	+1.3	12.3	12.3	14.1	16.1	18.5	19.5	18.0	16.6	17.3	15.6	17.3	+1.7
Non-MSA	8.6	8.9	9.8	9.8	13.2	12.1	13.0	12.8	12.8	12.3	11.0	-1.4	12.4	13.1	15.0	14.6	17.6	18.3	20.8	18.9	17.5	18.1	20.8	+2.7
Parental Education:[c]																								
1.0-2.0 (Low)	12.9	12.9	14.4	15.6	18.0	15.5	14.8	17.3	16.0	15.8	14.6	-1.2	14.4	16.6	18.1	17.1	20.8	22.7	19.1	21.5	19.2	20.4	21.1	+0.7
2.5-3.0	8.5	10.1	11.8	12.4	14.2	13.9	12.9	12.2	12.1	12.2	11.4	-0.8	13.7	12.5	14.6	16.3	19.7	19.4	19.9	19.1	19.1	19.4	18.4	-1.0
3.5-4.0	8.7	10.1	10.6	11.8	14.2	14.5	12.5	11.2	11.3	10.6	11.5	+0.9	12.1	12.7	14.8	15.9	18.3	19.9	19.8	16.4	16.5	17.4	18.8	+1.4
4.5-5.0	7.1	7.5	9.1	9.5	9.7	12.0	10.6	9.4	8.5	7.7	8.2	+0.6	11.0	10.9	11.7	13.3	15.9	16.6	16.5	14.1	15.4	14.5	15.4	+0.9
5.5-6.0 (High)	7.8	8.0	8.2	9.4	10.1	11.7	10.3	9.5	8.3	8.4	6.6	-1.8	11.6	10.7	12.2	12.8	13.4	15.4	15.4	14.4	15.6	14.5	10.3	-4.2
Race (2-year average):[d]																								
White	—	9.0	10.0	10.8	12.6	13.9	13.5	12.5	11.5	11.1	10.6	-0.5	—	13.7	14.4	15.4	17.7	20.0	20.5	19.7	18.7	18.6	19.2	+0.6
Black	—	4.9	5.0	5.9	5.7	5.3	4.7	4.0	4.1	3.8	3.9	+0.1	—	4.3	4.6	5.4	5.4	4.5	4.8	4.7	4.5	4.2	4.7	+0.5
Hispanic	—	12.2	13.7	15.2	15.3	14.7	13.6	13.5	14.5	13.9	12.2	-1.8	—	11.8	13.7	16.1	16.9	18.8	19.1	17.5	17.9	17.8	15.8	-2.1

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of amphetamines or tranquilizers not under a doctor's orders. The use of other narcotics and barbiturates has been excluded, because 8th and 10th graders appear to overreport their use (perhaps because they include the use of nonprescription drugs in their answers).

[b] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[c] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[d] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-4
Any Illicit Drug Other Than Marijuana:[a,b] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001[c]	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	26.2	25.4	26.0	27.1	28.2	30.4	34.0	30.1	28.4	28.0	27.4	25.9	24.1	21.1	20.0	17.9	16.2	14.9	17.1	18.0	19.4	19.8	20.7	20.2	20.7	20.4	19.8	-0.6
Gender:																												
Male	25.9	25.7	26.3	27.9	29.4	30.2	32.8	31.0	28.9	28.2	27.9	26.2	24.3	22.2	21.0	19.2	17.0	15.5	17.8	18.5	20.7	21.7	21.7	21.7	22.5	21.5	20.1	-1.4
Female	26.2	24.4	25.3	25.7	26.3	30.0	34.3	28.3	27.3	26.9	26.2	24.8	23.3	19.3	18.5	16.0	14.8	13.8	15.8	16.9	17.3	16.8	18.8	18.0	18.5	18.6	18.3	-0.4
College Plans:																												
None or under 4 years	—	28.7	30.1	30.0	31.8	35.5	38.3	34.0	32.3	32.9	31.6	31.3	28.8	24.5	25.5	23.1	20.1	19.5	19.8	22.9	23.9	24.2	25.8	26.5	24.4	24.7	24.9	+0.2
Complete 4 years	—	20.9	20.8	22.7	23.5	25.5	30.1	26.0	24.7	23.3	24.1	22.2	21.3	19.0	17.2	15.2	14.3	13.0	15.9	16.0	17.5	17.9	18.4	17.8	19.4	18.5	17.4	-1.1
Region:																												
Northeast	26.0	26.1	27.8	30.7	32.0	32.1	38.0	33.5	31.2	33.8	32.9	29.5	25.5	20.2	19.2	17.1	15.6	14.7	18.6	17.2	20.2	22.9	24.1	20.7	19.5	21.7	22.2	+0.5
North Central	29.2	26.1	27.7	26.8	27.6	30.9	36.1	31.1	28.6	26.1	25.9	25.1	22.7	20.3	21.5	18.0	17.4	15.5	16.4	20.1	19.1	19.2	18.9	19.8	20.9	18.9	18.0	-0.9
South	22.5	23.4	22.9	24.0	23.2	25.8	26.1	24.7	23.8	24.2	21.0	20.6	21.1	20.0	18.1	16.9	14.4	14.0	16.0	17.3	19.0	18.6	19.8	20.3	21.2	19.0	18.6	-0.4
West	28.2	26.6	26.0	28.8	33.3	35.2	38.7	32.7	33.0	31.3	33.0	31.6	29.5	24.8	22.3	20.4	17.9	15.8	18.5	17.3	19.9	19.2	20.9	20.0	20.8	23.2	21.8	-1.4
Population Density:																												
Large MSA	30.3	27.5	27.1	30.2	32.1	34.6	38.3	33.8	31.5	30.5	30.4	28.3	24.5	20.7	16.9	16.0	14.2	13.5	15.1	16.7	20.2	18.9	18.6	19.0	17.6	19.4	20.0	+0.6
Other MSA	26.3	25.8	26.8	27.3	28.7	30.1	33.3	30.0	29.7	27.8	26.9	26.4	24.5	22.7	20.9	18.5	17.9	14.9	18.2	19.2	19.2	20.2	21.5	20.4	21.6	20.9	19.6	-1.3
Non-MSA	23.4	23.3	24.2	24.2	24.7	27.5	31.4	27.0	24.4	26.2	25.5	23.1	23.0	18.4	21.1	18.4	14.9	16.1	16.8	17.2	18.7	19.8	21.2	21.3	22.4	20.7	20.1	-0.6
Parental Education:[d]																												
(Low) 1.0-2.0	—	23.2	23.2	24.7	25.2	28.2	29.2	25.7	25.6	27.3	25.8	23.2	21.5	19.7	18.2	15.2	17.4	14.9	15.6	17.8	19.4	16.9	19.9	20.0	22.2	20.0	15.8	-4.2
2.5-3.0	—	25.6	27.0	26.4	27.6	30.7	33.5	30.4	28.1	28.2	27.4	27.0	24.2	20.5	20.0	17.9	16.8	15.0	16.1	18.5	19.4	19.7	19.4	20.1	21.0	19.9	22.3	+2.4
3.5-4.0	—	26.1	26.2	27.8	29.2	30.7	34.7	30.9	28.6	29.3	28.9	26.6	24.7	20.5	21.4	19.1	16.3	15.0	17.8	17.6	19.2	19.8	20.4	21.0	21.9	20.5	18.1	-2.4
4.5-5.0	—	27.2	25.9	27.3	28.7	29.9	34.8	29.4	30.0	26.2	27.1	24.9	23.8	21.7	19.3	17.5	14.6	14.3	17.5	18.4	19.4	19.3	21.0	19.1	19.3	20.1	19.9	-0.2
5.5-6.0 (High)	—	25.6	24.8	28.6	30.4	30.8	36.7	31.3	29.0	26.2	23.8	23.8	24.9	22.0	19.6	17.2	14.9	14.3	17.6	16.5	18.3	20.2	21.7	18.9	19.4	20.3	18.6	-1.7
Race (2-year average):[e]																												
White	—	—	26.6	27.7	28.8	30.6	34.5	32.1	31.2	30.2	29.6	28.2	26.6	24.4	22.5	21.0	18.7	17.1	17.9	19.4	20.3	21.2	22.3	23.1	22.9	22.7	23.0	+0.2
Black	—	—	14.2	13.4	13.0	13.8	13.2	14.5	15.2	12.9	12.0	12.1	11.1	10.3	8.6	6.5	5.7	5.3	4.8	6.1	6.9	6.0	6.4	7.1	6.8	6.4	6.3	-0.1
Hispanic	—	—	23.8	23.5	23.3	24.7	27.6	25.5	25.2	26.2	27.2	26.2	23.0	20.5	17.7	15.6	15.8	15.1	15.6	16.5	17.9	19.7	18.9	17.5	18.5	21.2	18.2	-3.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Use of "any illicit drug" includes any use of marijuana, LSD, other hallucinogens, crack, other cocaine, or heroin, or any use of other narcotics, amphetamines, barbiturates, methaqualone (excluded since 1990), or tranquilizers not under a doctor's orders.

[b] Beginning in 1982 the question about amphetamine use was revised to get respondents to exclude the inappropriate reporting of nonprescription amphetamines. The prevalence of use rate dropped slightly as a result of this methodological change.

[c] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. For the tranquilizer list of examples, Miltown was replaced with Xanax. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[d] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[e] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-5
Marijuana: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percentage who used in last twelve months																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	6.2	7.2	9.2	13.0	15.8	18.3	17.7	16.9	16.5	15.6	15.4	-0.1	16.5	15.2	19.2	25.2	28.7	33.6	34.8	31.1	32.1	32.2	32.7	+0.5
Gender:																								
Male	7.3	7.4	10.5	15.1	17.7	19.6	19.2	18.0	18.1	16.7	18.1	+1.4	17.7	16.3	21.2	28.2	30.6	36.0	37.3	32.2	34.3	36.1	36.0	-0.1
Female	5.1	6.9	8.0	10.9	13.7	16.9	16.1	15.3	14.9	14.3	12.8	-1.5	15.1	13.9	16.9	21.9	26.5	31.4	32.3	30.1	29.7	28.4	29.6	+1.1
College Plans:																								
None or under 4 yrs.	15.8	17.5	22.4	27.7	30.3	34.6	34.5	35.0	34.9	33.6	34.4	+0.8	26.9	25.1	31.5	37.3	41.8	48.9	51.5	46.8	48.3	48.8	47.4	-1.3
Complete 4 yrs.	4.6	5.5	7.3	11.0	13.8	15.8	15.5	14.5	14.0	13.4	13.2	-0.2	14.2	13.0	16.5	22.4	26.4	31.0	32.0	28.2	29.3	29.7	30.3	+0.6
Region:																								
Northeast	5.0	5.8	6.2	12.1	13.0	15.3	16.2	11.7	14.4	13.2	14.5	+1.3	17.1	14.9	22.4	25.6	28.8	34.8	34.6	35.4	34.4	30.3	34.1	+3.8
North Central	5.9	6.0	8.0	12.0	17.5	18.6	17.0	18.1	18.5	16.6	14.1	-2.5	15.8	14.8	17.4	23.4	26.6	33.1	34.4	28.5	31.6	31.1	31.7	+0.6
South	6.1	7.3	9.0	11.4	14.7	17.1	17.2	17.9	16.7	15.2	16.8	+1.6	14.5	12.5	16.4	23.8	28.4	33.9	34.4	30.7	30.9	31.4	31.2	-0.2
West	7.8	10.3	14.8	18.1	18.4	22.5	20.6	18.2	15.6	16.9	15.5	-1.4	19.4	20.4	24.0	30.0	32.2	32.4	36.5	30.7	32.0	37.1	36.4	-0.8
Population Density:																								
Large MSA	5.2	6.7	8.0	13.1	15.6	18.3	16.4	16.0	15.6	14.5	12.4	-2.1	16.5	15.1	19.0	26.3	27.8	31.5	34.1	28.7	31.2	32.4	30.0	-2.5
Other MSA	7.2	8.3	10.9	15.7	17.2	19.5	18.2	17.4	15.4	14.8	17.4	+2.6s	17.3	15.9	19.8	28.2	31.2	36.2	36.6	33.1	33.6	32.8	35.2	+2.4
Non-MSA	5.3	5.7	7.2	8.0	13.7	15.8	18.0	16.9	19.7	18.5	15.3	-3.3s	14.9	13.9	18.2	18.5	24.8	30.9	32.5	30.2	30.0	31.1	30.9	-0.1
Parental Education:[a]																								
1.0-2.0 (Low)	13.2	12.7	13.6	18.7	23.0	20.2	24.8	25.0	25.8	26.2	26.0	-0.2	20.3	18.9	22.4	25.8	32.0	32.9	34.5	31.7	38.1	37.1	33.6	-3.5
2.5-3.0	7.0	7.7	10.7	14.5	17.9	20.6	20.3	20.0	20.8	19.4	19.5	+0.1	17.8	16.0	19.7	26.3	31.8	35.6	36.8	35.3	35.4	34.9	37.1	+2.2
3.5-4.0	6.2	7.0	9.7	13.2	17.2	20.2	19.5	17.7	16.3	15.9	16.7	+0.8	16.2	15.1	19.3	25.6	30.0	36.4	37.8	31.6	31.9	35.0	32.6	-2.4
4.5-5.0	3.7	5.4	7.4	10.9	12.7	16.2	15.7	13.7	11.7	10.8	11.1	+0.4	14.9	14.1	17.6	23.8	27.0	31.7	33.1	28.3	28.8	28.9	31.4	+2.5
5.5-6.0 (High)	4.6	5.2	6.4	11.0	13.0	14.7	12.1	12.7	12.4	11.5	9.4	-2.1	15.9	13.7	18.5	23.3	23.4	30.3	30.5	27.7	30.6	27.3	29.4	+2.1
Race (2-year average):[b]																								
White	—	6.4	7.8	10.0	13.5	16.7	17.8	16.7	15.4	14.9	14.7	-0.2	—	17.0	18.0	22.6	27.7	32.0	35.3	34.2	32.5	32.6	32.9	+0.2
Black	—	4.1	5.7	8.9	11.9	14.0	15.3	16.0	16.3	16.1	14.6	-1.6	—	7.6	8.7	15.3	20.9	25.7	28.4	26.9	26.3	27.6	28.7	+1.1
Hispanic	—	11.9	13.9	18.1	20.4	20.8	21.8	22.7	22.8	20.1	19.9	-0.2	—	18.9	21.3	25.1	29.2	34.6	36.8	34.4	34.0	34.8	34.9	+0.1

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-6
Marijuana: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	40.0	44.5	47.6	50.2	50.8	48.8	46.1	44.3	42.3	40.0	40.6	38.8	36.3	33.1	29.6	27.0	23.9	21.9	26.0	30.7	34.7	35.8	38.5	37.5	37.8	36.5	37.0	+0.5
Gender:																												
Male	45.8	50.6	53.2	55.9	55.8	53.4	49.2	47.2	45.7	43.2	43.1	41.2	38.6	35.8	32.8	29.4	27.2	24.4	29.0	35.1	38.1	39.4	40.9	41.7	41.4	39.2	40.1	+0.9
Female	34.9	37.8	42.0	44.3	45.7	44.1	42.5	40.8	38.4	36.0	37.8	36.0	33.8	30.3	26.3	24.2	20.1	18.9	22.4	26.4	30.6	31.6	35.5	33.0	34.1	33.4	33.6	+0.2
College Plans:																												
None or under 4 years	—	46.8	50.7	51.6	53.1	51.7	49.7	48.2	46.0	44.2	44.0	42.7	40.6	36.2	34.4	31.1	27.6	27.5	29.1	34.4	39.0	41.7	44.6	43.0	43.2	40.3	41.5	+1.2
Complete 4 years	—	40.7	43.4	47.1	47.3	45.9	42.6	40.6	38.3	35.9	37.5	36.1	34.0	31.3	27.3	24.7	22.0	19.4	24.4	29.1	32.6	33.4	36.4	35.2	35.9	34.6	35.3	+0.7
Region:																												
Northeast	47.4	52.7	53.5	59.2	60.6	55.5	53.2	50.9	49.3	49.6	48.2	44.6	41.2	36.7	31.3	32.2	28.2	23.9	31.2	36.0	37.7	40.0	43.5	43.0	39.0	42.3	43.8	+1.5
North Central	40.1	44.0	48.1	51.6	52.2	48.9	46.8	45.6	42.0	36.4	40.8	40.2	37.4	34.3	33.0	28.7	26.1	22.7	26.0	30.5	36.9	36.9	36.5	33.8	38.0	34.5	36.9	+2.4
South	32.4	37.9	42.5	42.7	41.2	42.0	38.0	36.7	36.1	35.6	31.0	31.7	30.2	28.7	25.0	21.4	18.1	18.1	23.2	28.7	31.8	32.8	35.0	36.5	36.0	30.7	32.4	+1.7
West	44.1	45.8	46.8	49.1	51.9	51.7	49.6	45.5	44.8	43.2	46.2	41.2	39.6	35.6	32.3	28.3	26.8	26.1	26.4	30.0	33.8	35.6	42.6	39.0	39.8	43.1	38.4	-4.8
Population Density:																												
Large MSA	50.4	51.3	53.2	57.2	58.7	56.3	51.4	50.4	47.0	44.2	44.4	42.6	39.3	34.3	27.8	27.7	24.3	22.6	29.1	32.0	37.5	37.2	38.3	38.4	38.7	37.1	39.2	+2.1
Other MSA	40.3	44.2	48.9	50.8	51.9	49.8	46.4	44.8	44.0	41.0	40.7	39.4	36.9	34.7	30.3	28.3	27.5	22.1	26.2	32.7	34.9	38.6	40.5	38.8	39.1	38.1	36.7	-1.4
Non-MSA	32.9	39.8	41.2	43.3	43.3	41.9	41.6	38.5	36.5	35.3	37.3	34.7	32.2	29.0	30.0	23.5	17.5	21.0	23.1	25.8	31.0	29.6	34.9	33.5	34.7	32.9	35.1	+2.3
Parental Education:[a]																												
(Low) 1.0-2.0	35.2	38.9	41.0	42.5	46.0	43.7	41.8	38.9	39.7	35.7	37.1	33.4	30.7	30.7	23.3	21.0	22.4	21.2	23.0	26.3	30.9	31.3	34.8	34.2	35.5	36.5	33.9	-2.6
2.5-3.0	39.2	46.1	48.2	50.3	50.0	49.0	45.3	44.5	42.2	40.1	40.6	38.8	36.3	31.1	29.6	26.9	22.5	21.1	24.1	29.7	33.8	35.1	37.4	36.1	38.6	35.1	37.0	+1.9
3.5-4.0	38.5	44.9	49.5	51.4	52.7	49.8	47.0	46.5	42.2	41.4	41.0	40.1	36.8	33.4	31.4	27.6	24.0	22.7	26.6	31.5	34.2	36.1	38.1	39.0	38.6	36.8	38.4	+1.5
4.5-5.0	40.6	46.8	49.3	53.2	53.7	50.5	47.6	45.9	43.5	39.6	43.2	39.9	37.5	35.1	29.7	28.5	23.8	20.8	27.2	32.0	35.0	36.6	40.1	37.4	35.9	35.8	37.4	+1.6
5.5-6.0 (High)	38.7	47.5	48.6	55.2	51.2	52.0	48.5	45.7	43.7	39.9	37.9	38.9	38.6	35.9	30.7	29.4	28.2	22.6	28.0	32.3	37.5	36.7	39.7	38.3	39.2	38.0	35.2	-2.8
Race (2-year average):[b]																												
White	—	—	46.8	50.1	51.8	51.2	49.1	47.1	44.6	42.0	41.6	41.4	39.7	37.6	34.5	31.6	28.2	24.9	25.9	30.2	34.2	36.4	38.7	39.9	39.1	38.2	38.5	+0.3
Black	—	—	37.9	39.6	38.4	37.5	36.1	35.5	37.4	36.4	33.4	30.6	25.7	21.2	17.8	13.7	11.4	11.5	14.2	20.7	26.8	30.2	30.4	30.0	30.4	30.0	29.0	-1.1
Hispanic	—	—	45.8	43.4	42.1	44.1	41.2	38.8	38.3	38.8	37.8	36.7	33.3	29.6	25.0	21.6	23.6	24.7	23.5	25.7	29.7	32.3	36.4	37.2	37.8	40.5	37.6	-3.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-7
Inhalants: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	9.0	9.5	11.0	11.7	12.8	12.2	11.8	11.1	10.3	9.4	9.1	-0.3	7.1	7.5	8.4	9.1	9.6	9.5	8.7	8.0	7.2	7.3	6.6	-0.7
Gender:																								
Male	9.0	9.2	10.4	11.2	11.5	10.3	10.5	10.6	9.5	8.9	8.4	-0.6	7.4	7.6	9.1	9.7	10.3	10.1	9.1	8.4	7.6	7.7	6.7	-1.0
Female	9.0	9.8	11.9	12.2	14.0	14.1	12.9	11.6	11.1	9.9	9.9	+0.1	6.6	7.5	7.7	8.6	8.9	8.9	8.2	7.6	6.9	7.0	6.5	-0.5
College Plans:																								
None or under 4 yrs.	15.0	15.6	17.7	18.3	19.6	18.2	18.1	20.9	17.9	17.2	15.1	-2.0	12.0	12.4	14.0	15.1	14.6	14.3	14.4	13.5	11.6	11.2	11.0	-0.2
Complete 4 yrs.	8.1	8.8	10.2	10.9	11.9	11.4	11.2	10.2	9.5	8.6	8.6	0.0	5.9	6.4	7.3	7.8	8.7	8.7	7.7	7.0	6.5	6.7	5.9	-0.8
Region:																								
Northeast	8.0	8.6	11.3	12.0	13.1	11.7	12.1	9.1	9.8	8.7	9.4	+0.7	7.2	7.8	10.6	9.8	10.4	11.5	8.9	9.3	8.3	7.2	6.5	-0.6
North Central	9.8	10.5	9.9	10.3	13.8	13.3	11.3	11.3	10.6	10.6	8.8	-1.8	7.5	8.0	8.3	8.4	10.4	9.8	8.3	6.7	8.4	7.5	6.5	-1.0
South	8.9	9.1	10.0	11.3	12.1	11.3	11.6	11.3	9.9	8.4	9.5	+1.1	7.2	6.6	7.3	9.0	9.4	9.1	8.8	8.3	6.5	7.4	6.8	-0.6
West	8.8	9.8	14.2	14.0	12.4	12.9	12.6	12.4	10.9	10.5	8.6	-1.9	6.2	8.0	8.4	9.9	8.1	8.0	8.5	7.8	6.1	7.2	6.7	-0.5
Population Density:																								
Large MSA	9.9	9.1	10.8	11.6	11.7	11.4	10.4	8.6	8.8	8.3	8.3	0.0	7.7	7.8	8.5	7.9	8.7	8.1	8.1	6.7	6.9	7.1	6.0	-1.1
Other MSA	8.5	10.3	12.3	13.1	13.7	13.4	11.5	11.1	10.1	9.4	8.9	-0.4	7.1	7.4	8.4	9.8	9.7	9.6	8.4	7.7	7.0	6.8	6.9	0.0
Non-MSA	9.1	8.6	8.5	9.3	12.3	11.0	13.9	14.0	12.3	10.9	10.4	-0.5	6.5	7.5	8.6	9.1	10.5	11.0	9.8	10.1	8.3	8.5	7.0	-1.5
Parental Education:[a]																								
1.0-2.0 (Low)	12.0	11.4	11.5	12.4	13.0	11.3	12.1	14.4	12.9	13.1	10.7	-2.4	7.0	8.2	10.2	8.7	9.4	10.8	9.3	9.7	8.7	8.5	7.6	-0.9
2.5-3.0	9.5	9.9	10.9	12.1	13.9	12.6	12.6	12.0	11.8	11.3	9.7	-1.6	8.0	7.9	9.1	9.5	11.0	9.9	8.5	9.1	8.0	8.1	7.5	-0.6
3.5-4.0	8.9	10.0	11.5	12.3	14.7	13.4	13.5	12.8	10.8	9.9	9.4	-0.5	7.5	8.3	8.3	9.6	10.2	10.1	9.4	8.1	6.9	7.4	5.9	-1.6
4.5-5.0	8.0	8.4	10.6	11.0	12.3	13.2	11.4	9.7	9.2	7.1	9.0	+1.9s	6.4	6.5	7.2	8.7	9.4	8.4	8.3	7.1	6.7	6.5	6.8	+0.3
5.5-6.0 (High)	8.4	10.3	12.6	12.2	11.6	11.7	10.8	10.6	9.1	9.2	7.7	-1.5	6.6	6.7	8.2	8.2	7.0	10.1	8.2	6.7	7.2	7.2	5.5	-1.7
Race (2-year average):[b]																								
White	—	10.1	11.3	12.4	13.8	14.6	14.1	13.3	12.1	10.9	10.1	-0.8	—	8.3	8.8	9.6	10.6	11.0	10.4	9.6	8.9	8.4	7.9	-0.5
Black	—	4.4	4.6	5.3	5.0	4.2	3.8	4.2	4.2	4.3	4.8	+0.5	—	3.6	3.7	3.3	2.8	2.3	2.3	2.4	2.0	2.0	2.1	+0.1
Hispanic	—	10.4	11.5	12.5	13.3	12.7	11.4	11.5	12.7	12.2	11.0	-1.2	—	6.4	8.3	9.0	8.5	8.2	7.9	7.6	7.3	6.3	5.9	-0.5

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-8
Inhalants:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	3.0	3.7	4.1	5.4	4.6	4.1	4.5	4.3	5.1	5.7	6.1	6.9	6.5	5.9	6.9	6.6	6.2	7.0	7.7	8.0	7.6	6.7	6.2	5.6	5.9	4.5	-1.4s
Adjusted[b]	—	—	—	—	8.9	7.9	6.1	6.6	6.2	7.2	7.5	8.9	8.1	7.1	6.9	7.5	6.9	6.4	7.4	8.2	8.4	8.5	7.3	7.1	6.0	6.2	4.9	-1.4
Gender:																												
Male	—	3.8	5.1	5.6	6.7	5.9	5.1	5.8	5.8	6.5	6.9	7.8	8.3	8.2	7.8	8.8	8.2	8.0	9.2	9.6	9.9	9.1	8.3	7.5	6.5	6.8	5.5	-1.3
Female	—	2.0	2.4	2.8	4.2	3.5	3.2	3.1	2.8	3.8	4.5	4.7	5.6	4.9	4.0	4.9	5.0	4.5	4.8	6.0	6.2	6.1	5.2	5.1	4.9	5.1	3.5	-1.6
College Plans:																												
None or under 4 years	—	3.6	4.7	5.0	6.3	5.0	4.3	4.9	4.7	5.8	5.8	7.7	8.0	8.1	7.1	7.8	7.7	7.7	8.0	9.0	9.7	8.2	8.0	7.9	6.5	6.7	6.6	-0.1
Complete 4 years	—	2.2	2.9	3.4	4.5	4.3	4.0	4.1	3.9	4.7	5.7	5.2	6.4	6.0	5.4	6.4	6.3	5.7	6.7	7.4	7.4	7.3	6.5	5.7	5.4	5.5	3.9	-1.6s
Region:																												
Northeast	—	3.2	4.1	4.4	6.4	6.0	5.2	6.2	5.0	6.1	8.0	5.6	6.7	6.0	6.3	7.4	6.7	6.0	8.9	10.3	10.3	10.8	9.4	8.0	6.2	6.3	5.7	-0.6
North Central	—	2.6	4.2	4.8	5.9	4.6	3.8	3.6	4.5	5.0	5.8	6.7	8.6	7.2	6.7	8.0	8.6	7.4	6.3	9.5	8.6	7.6	6.9	7.6	6.3	5.5	5.0	-0.4
South	—	3.8	3.3	3.6	4.3	3.4	3.2	3.8	3.8	4.6	4.2	5.7	6.1	6.8	5.5	6.4	5.0	4.8	6.5	6.2	7.0	6.5	5.6	5.1	5.2	5.5	3.4	-2.2s
West	—	1.7	3.0	3.6	4.9	4.9	4.7	4.4	4.3	5.3	5.4	6.6	6.2	5.6	4.8	5.7	6.8	7.5	7.0	5.7	6.7	6.0	5.4	4.7	4.9	6.7	4.8	-1.9
Population Density:																												
Large MSA	—	2.9	3.4	3.4	5.1	5.7	4.7	5.5	4.8	5.3	5.9	5.2	6.0	6.5	5.1	6.7	5.2	6.0	7.4	7.6	8.5	7.8	5.9	5.5	4.8	6.3	4.4	-1.9
Other MSA	—	2.6	3.6	3.7	4.8	4.2	4.0	3.9	4.4	5.0	5.9	6.3	6.9	6.0	5.8	6.8	7.8	6.6	7.3	7.7	7.8	7.9	6.5	6.1	5.3	4.9	4.3	-0.6
Non-MSA	—	3.4	4.2	5.3	6.2	4.4	3.7	4.4	3.9	5.2	5.4	6.6	7.8	7.5	6.8	7.4	5.8	5.6	6.0	7.6	7.8	7.0	8.1	7.4	6.9	7.2	5.2	-2.0
Parental Education:[c]																												
(Low) 1.0-2.0	—	3.7	3.9	4.5	5.2	3.6	3.6	3.2	3.1	4.5	4.2	4.9	4.6	5.3	5.9	5.0	6.1	4.2	4.3	5.3	7.5	5.8	5.4	6.3	4.8	4.0	3.2	-0.9
2.5-3.0	—	3.1	4.1	4.0	5.0	4.8	4.0	4.8	4.0	5.2	5.6	6.1	6.8	6.3	5.5	6.9	6.6	6.7	6.0	7.8	8.0	7.9	6.3	6.0	5.4	5.2	5.7	+0.5
3.5-4.0	—	3.1	3.4	4.1	5.1	4.7	4.0	4.6	4.9	5.6	5.5	6.2	7.1	5.8	6.1	7.2	6.1	6.3	7.7	7.1	6.7	7.8	7.1	7.3	6.1	6.1	4.2	-2.0
4.5-5.0	—	2.7	3.0	3.9	5.8	4.3	4.4	4.4	5.2	5.0	7.0	6.9	7.2	7.0	5.7	7.4	7.4	6.3	7.6	8.9	8.9	7.4	7.9	5.3	5.6	5.9	3.8	-2.1s
5.5-6.0 (High)	—	3.7	4.2	5.0	7.2	5.8	4.9	6.0	4.7	5.6	6.8	6.4	8.7	9.1	6.8	7.6	7.1	6.7	9.4	9.7	9.7	8.5	6.0	6.2	6.1	7.5	5.8	-1.8
Race (2-year average):[d]																												
White	—	—	3.6	4.3	5.1	5.3	4.7	4.7	4.8	5.1	5.9	6.5	7.3	7.6	7.0	7.2	7.6	7.2	7.6	8.6	9.1	9.0	8.6	7.9	7.0	6.4	5.9	-0.5
Black	—	—	1.5	1.3	2.1	2.2	2.1	1.9	1.8	2.2	2.0	2.1	3.0	3.1	2.2	2.1	2.7	2.5	2.2	2.4	2.6	2.2	1.9	1.7	1.4	1.9	2.2	+0.4
Hispanic	—	—	2.7	3.0	2.9	2.9	3.5	4.1	3.4	4.6	6.5	5.5	4.6	4.1	4.7	4.8	5.4	6.0	5.7	5.5	5.8	5.9	4.7	4.5	5.5	6.3	4.5	-1.8

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Appendix B for definition of variables in table.
See Table D-59 for the number of subgroup cases. Data based on five of six forms in 1989–98; N is five-sixths of N indicated in Table D-59. Data based on four of five forms in 1976–88; N is four-fifths of N indicated in Table D-59. Data based on three of six forms beginning in 1999; N is one-half of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] All data are unadjusted for underreporting of amyl and butyl nitrites, except where otherwise noted.

[b] Adjusted for underreporting of amyl and butyl nitrites. See text for details.

[c] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[d] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-9
Hallucinogens: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[a]	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[a]	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	1.9	2.5	2.6	2.7	3.6	4.1	3.7	3.4	2.9	2.8	2.5	-0.4	4.0	4.3	4.7	5.8	7.2	7.8	7.6	6.9	6.9	6.1	5.2	-0.9
Gender:																								
Male	2.2	2.6	2.8	3.0	4.0	4.3	4.0	3.7	3.3	3.2	2.7	-0.5	4.4	4.7	5.7	6.6	8.1	8.5	8.7	7.4	8.1	7.2	5.8	-1.4
Female	1.6	2.3	2.3	2.4	3.3	3.7	3.2	2.9	2.4	2.5	2.4	-0.1	3.6	3.8	3.6	4.8	6.1	7.0	6.4	6.3	5.7	4.9	4.2	-0.7
College Plans:																								
None or under 4 yrs.	5.1	7.2	7.1	6.7	9.6	9.6	10.1	9.2	9.4	7.7	7.7	0.0	7.5	7.5	9.1	10.4	12.5	14.5	13.6	14.2	14.3	12.3	11.5	-0.7
Complete 4 yrs.	1.4	1.8	1.9	2.2	2.9	3.2	2.9	2.7	2.1	2.3	1.9	-0.4	3.3	3.6	3.7	4.8	6.2	6.6	6.5	5.6	5.7	5.1	4.0	-1.0
Region:																								
Northeast	1.5	1.6	1.9	2.9	3.4	3.7	2.8	2.4	2.6	2.3	1.8	-0.5	4.0	2.7	4.7	5.8	5.6	7.7	6.2	8.1	8.6	5.8	4.4	-1.4
North Central	1.6	2.4	1.7	2.2	3.8	3.9	3.8	3.5	3.4	3.5	1.9	-1.6	3.4	4.3	4.6	5.7	7.8	9.0	7.0	5.6	6.7	6.1	5.4	-0.7
South	1.9	2.7	2.8	2.4	3.3	3.9	3.4	3.7	2.9	2.7	3.3	+0.6	3.6	3.9	3.6	5.1	7.3	7.5	8.3	7.6	6.5	5.7	4.8	-0.9
West	2.8	3.2	4.2	3.9	4.2	5.1	4.8	3.5	2.4	2.7	2.3	-0.4	5.2	6.5	6.7	7.1	7.6	6.6	8.5	6.1	6.1	6.9	6.4	-0.5
Population Density:																								
Large MSA	2.1	2.2	2.2	3.1	4.0	3.8	3.3	2.9	2.5	2.3	1.9	-0.4	4.1	4.6	4.9	6.0	7.1	8.6	7.8	6.3	5.8	7.5	4.1	-3.3s
Other MSA	2.0	3.0	3.1	3.1	3.8	4.8	4.0	3.4	3.1	3.0	2.6	-0.4	4.8	4.4	4.9	6.4	8.0	8.2	7.9	7.6	7.8	5.8	5.4	-0.4
Non-MSA	1.5	2.0	1.8	1.6	3.0	3.2	3.5	3.8	2.8	3.2	2.9	-0.3	2.5	3.7	4.1	4.4	5.5	6.0	6.7	6.3	6.5	5.1	5.8	+0.7
Parental Education:[b]																								
1.0-2.0 (Low)	3.9	3.7	3.5	3.1	5.1	4.8	5.0	5.0	4.8	5.4	4.9	-0.5	3.7	4.9	6.0	6.1	7.7	8.0	6.5	8.3	7.0	5.2	6.5	+1.3
2.5-3.0	2.2	2.3	2.7	2.8	3.8	4.7	3.9	3.4	3.5	3.2	3.1	0.0	4.3	4.2	4.5	5.5	7.6	8.5	7.3	8.2	8.1	5.8	5.9	+0.2
3.5-4.0	1.6	2.5	2.8	2.8	4.1	4.1	3.8	3.7	2.8	2.8	2.9	+0.2	3.7	4.6	4.8	5.9	7.6	8.6	8.2	6.6	6.6	6.7	6.2	-0.5
4.5-5.0	1.6	2.0	2.3	2.8	3.2	4.0	3.4	3.0	2.1	2.1	1.9	-0.2	4.1	3.8	4.5	5.5	6.6	6.9	8.2	6.1	6.6	6.3	4.3	-2.1s
5.5-6.0 (High)	1.4	2.4	2.0	2.5	3.2	3.5	3.5	3.1	2.5	3.1	0.7	-2.3sss	4.6	4.2	4.6	6.2	6.5	7.2	6.8	6.0	6.5	6.2	2.9	-3.3s
Race (2-year average):[c]																								
White	—	2.2	2.6	2.8	3.6	4.5	4.5	3.9	3.2	3.1	2.9	-0.2	—	4.9	5.1	5.6	7.1	8.6	8.9	8.4	8.2	7.6	6.6	-1.1
Black	—	0.7	0.7	0.6	0.6	0.7	0.7	0.7	0.6	0.7	0.7	0.0	—	0.2	0.6	1.1	1.2	0.9	1.0	1.1	1.0	1.0	1.3	+0.3
Hispanic	—	3.8	4.1	4.0	4.0	4.1	4.2	4.6	4.5	4.0	3.4	-0.6	—	3.6	4.5	5.7	6.3	6.6	7.3	7.3	6.4	5.2	4.4	-0.8

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-10
Hallucinogens:[a] Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001[b]	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1620*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	11.2	9.4	8.8	9.6	9.9	9.3	9.0	8.1	7.3	6.5	6.3	6.0	6.4	5.5	5.6	5.9	5.8	5.9	7.4	7.6	9.3	10.1	9.8	9.0	9.4	8.1	8.4	+0.2
Adjusted[c]	—	—	—	—	11.8	10.4	10.1	9.0	8.3	7.3	7.6	7.6	6.7	5.8	6.2	6.0	6.1	6.2	7.8	7.8	9.7	10.7	10.0	9.2	9.8	8.7	9.0	+0.3
Gender:																												
Male	13.7	11.6	10.8	11.6	11.8	11.7	10.9	9.6	8.6	7.9	8.1	7.2	7.5	7.2	7.4	7.7	7.5	7.1	8.9	9.2	11.9	12.4	12.0	11.0	11.4	9.6	9.9	+0.3
Female	9.0	6.9	6.5	7.3	7.6	6.7	6.8	6.1	5.5	4.7	4.4	4.7	5.2	3.7	3.6	3.8	3.9	4.7	5.6	5.8	6.3	7.3	7.4	6.8	7.4	6.3	6.4	+0.1
College Plans:																												
None or under 4 years	—	11.2	10.6	11.0	11.3	11.2	10.7	9.5	8.9	8.3	7.7	7.4	7.9	6.4	7.1	6.6	7.0	7.8	8.1	8.4	11.9	12.1	11.3	12.0	10.5	10.3	9.6	-0.7
Complete 4 years	—	6.9	6.4	7.3	7.5	7.1	7.4	6.2	5.4	4.7	5.0	4.7	5.4	4.7	4.8	5.3	5.3	5.1	6.9	7.0	8.2	9.0	9.0	7.8	8.7	7.0	7.4	+0.5
Region:																												
Northeast	13.2	10.9	10.6	13.0	12.9	12.2	12.9	11.4	8.7	11.3	9.9	7.9	7.5	5.8	5.6	6.6	7.0	7.1	9.0	9.0	10.1	13.3	13.9	10.7	9.8	9.3	10.8	+1.5
North Central	13.0	10.3	9.7	10.7	11.1	11.3	10.3	9.1	8.9	6.0	6.8	6.6	6.9	5.3	6.6	5.7	6.5	5.9	6.8	8.1	9.2	8.8	7.6	8.4	9.8	7.0	8.2	+1.2
South	8.5	7.4	6.8	6.3	5.7	5.4	4.1	4.6	5.2	3.9	3.2	3.3	4.8	5.2	4.9	5.0	3.7	4.7	5.9	6.7	8.8	8.9	9.2	8.5	8.6	6.9	6.3	-0.6
West	10.2	9.3	8.2	9.6	11.0	9.2	10.4	7.8	6.3	7.0	6.3	7.2	7.4	6.0	5.5	6.9	7.3	7.3	9.2	7.1	9.6	10.5	9.5	9.1	10.0	10.5	9.6	-0.9
Population Density:																												
Large MSA	13.9	11.1	9.9	11.9	12.3	11.6	12.0	10.9	9.2	8.8	8.3	7.6	7.9	6.5	5.4	5.7	5.1	6.2	7.3	8.1	11.0	10.5	8.8	8.7	8.4	8.9	9.6	+0.7
Other MSA	12.1	9.8	9.1	9.3	10.5	9.8	9.0	7.6	7.6	6.3	6.1	5.9	6.3	6.0	5.9	6.6	7.7	6.0	8.1	8.6	9.5	11.4	11.2	9.9	10.4	8.3	8.5	+0.2
Non-MSA	8.5	7.7	7.5	8.3	7.1	7.1	6.8	6.5	5.3	5.0	5.0	4.9	5.3	3.5	5.0	4.5	3.3	5.5	6.3	5.1	7.0	7.4	8.3	7.4	8.8	7.0	6.7	-0.3
Parental Education:[d]																												
(Low) 1.0-2.0)	8.9	7.4	6.8	7.7	7.1	8.0	6.7	6.5	6.5	5.4	4.8	5.4	5.8	4.9	4.2	3.8	4.9	3.6	4.9	5.0	7.2	7.4	7.3	7.9	9.0	7.0	5.3	-1.7
2.5-3.0	10.2	10.0	9.1	9.6	9.6	9.5	8.9	8.0	6.8	6.7	6.4	6.0	6.2	4.2	4.9	4.6	4.9	5.6	5.9	7.0	8.7	8.8	8.5	8.8	8.6	7.4	9.5	+2.1
3.5-4.0	10.9	9.8	9.2	9.7	9.7	9.2	9.2	8.6	7.7	6.3	7.2	6.3	6.0	4.8	5.6	6.5	6.2	6.0	7.5	8.0	9.5	10.3	9.9	9.5	10.6	8.2	7.4	-0.8
4.5-5.0	11.1	10.1	8.8	10.2	10.9	9.1	9.4	7.8	7.0	5.9	6.2	5.5	6.8	6.7	6.6	6.8	6.1	6.2	8.9	7.7	9.6	10.5	10.4	8.6	9.3	7.7	8.7	+1.1
5.5-6.0 (High)	8.9	9.4	9.5	10.2	11.7	9.9	10.6	9.0	7.0	7.6	4.3	5.9	7.2	7.2	7.0	8.2	7.3	7.4	8.9	9.0	9.5	11.4	11.6	9.4	8.4	9.6	7.0	-2.6
Race (2-year average):[e]																												
White	—	—	9.8	9.9	10.5	10.3	10.0	9.3	8.3	7.5	7.0	6.7	6.8	6.8	6.4	6.7	6.8	6.9	7.9	8.6	9.5	10.8	11.6	11.3	10.7	9.9	9.0	-0.8
Black	—	—	2.4	2.3	2.0	1.9	1.9	1.8	2.2	1.7	1.2	1.6	1.5	1.0	0.9	0.8	0.6	0.7	0.8	1.2	1.2	1.7	1.9	1.4	1.2	1.6	1.4	-0.2
Hispanic	—	—	7.9	7.2	7.0	7.1	7.0	7.7	6.6	5.2	5.7	5.7	5.0	4.0	3.2	3.3	4.4	4.6	5.3	5.8	7.1	8.3	7.3	6.8	7.9	9.6	7.8	-1.7

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] All data are unadjusted for underreporting of PCP, unless otherwise indicated. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples.

[b] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[c] Adjusted for underreporting of PCP. See text for details.

[d] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[e] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-11
LSD: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	1.7	2.1	2.3	2.4	3.2	3.5	3.2	2.8	2.4	2.4	2.2	-0.3	3.7	4.0	4.2	5.2	6.5	6.9	6.7	5.9	6.0	5.1	4.1	-1.0s
Gender:																								
Male	2.0	2.1	2.5	2.6	3.4	3.7	3.5	3.2	2.7	2.6	2.3	-0.4	3.9	4.3	5.1	5.9	7.4	7.6	7.6	6.3	7.0	5.9	5.1	-0.8
Female	1.3	2.0	2.1	2.1	2.9	3.2	2.8	2.4	2.0	2.2	2.1	-0.1	3.4	3.6	3.2	4.3	5.5	6.2	5.8	5.4	5.1	4.3	3.1	-1.2s
College Plans:																								
None or under 4 yrs.	4.5	6.4	6.4	6.2	8.5	8.2	9.3	7.8	8.2	6.7	5.8	-0.9	6.8	7.0	8.4	9.4	11.1	13.1	12.8	12.4	13.1	11.1	9.9	-1.2
Complete 4 yrs.	1.2	1.5	1.6	1.8	2.5	2.7	2.5	2.2	1.7	2.0	1.8	-0.2	3.0	3.4	3.3	4.2	5.6	5.8	5.7	4.7	4.9	4.1	3.2	-1.0s
Region:																								
Northeast	1.3	1.4	1.8	2.6	2.9	2.9	2.3	2.1	2.2	1.9	1.9	0.0	3.6	2.6	3.8	5.1	4.7	6.4	5.2	7.1	7.5	4.1	4.0	-0.1
North Central	1.4	1.8	1.4	1.7	3.5	3.4	3.3	2.5	2.7	3.0	1.7	-1.3s	3.2	4.1	4.4	5.2	7.3	8.3	6.0	4.5	6.0	5.4	4.3	-1.0
South	1.8	2.4	2.4	2.1	2.8	3.4	3.0	3.2	2.5	2.4	2.7	+0.3	3.3	3.7	3.2	4.6	6.8	6.8	7.9	6.5	5.8	5.0	3.5	-1.5s
West	2.2	2.9	3.7	3.3	3.8	4.3	4.3	3.2	1.9	2.3	2.0	-0.3	4.8	5.9	6.1	6.3	6.5	5.7	7.4	5.2	5.1	5.9	5.3	-0.7
Population Density:																								
Large MSA	1.9	2.0	2.0	2.7	3.6	3.2	2.9	2.6	2.2	2.0	1.8	-0.2	3.8	4.4	4.4	5.4	6.6	7.6	7.0	5.4	4.9	6.4	3.8	-2.6ss
Other MSA	1.7	2.5	2.8	2.8	3.3	4.1	3.6	2.9	2.7	2.6	2.3	-0.3	4.4	4.1	4.4	5.9	7.1	7.4	7.0	6.6	6.7	4.8	4.1	-0.7
Non-MSA	1.3	1.6	1.4	1.3	2.4	2.6	2.8	2.9	1.9	2.8	2.4	-0.4	2.3	3.5	3.7	3.7	5.0	5.2	6.0	5.0	5.9	4.4	4.6	+0.2
Parental Education:[a]																								
1.0-2.0 (Low)	3.5	3.1	3.1	2.8	4.6	4.4	4.7	4.4	3.7	4.9	4.1	-0.8	3.1	4.4	5.5	5.5	6.9	7.6	5.9	7.9	6.3	4.9	3.9	-1.0
2.5-3.0	1.8	2.1	2.3	2.6	3.1	4.0	3.2	2.8	2.7	2.9	2.6	-0.3	4.0	4.2	4.2	5.1	6.9	7.6	6.6	7.0	7.3	5.1	4.8	-0.3
3.5-4.0	1.4	2.0	2.4	2.4	3.6	3.5	3.4	3.1	2.4	2.2	2.4	+0.2	3.4	4.1	4.2	5.3	6.9	7.9	7.4	5.6	5.8	5.6	4.3	-1.3
4.5-5.0	1.4	1.5	2.1	2.1	2.6	3.4	2.9	2.5	1.9	1.8	1.5	-0.2	3.8	3.6	3.9	4.8	6.0	6.0	7.0	5.0	5.7	5.0	3.8	-1.2
5.5-6.0 (High)	1.3	2.0	2.0	2.1	2.9	3.0	2.9	2.4	1.9	2.3	1.3	-1.1	4.2	3.9	3.9	5.4	5.9	5.8	6.0	4.6	5.3	5.0	3.5	-1.5
Race (2-year average):[b]																								
White	—	1.9	2.3	2.5	3.1	3.9	3.9	3.2	2.6	2.6	2.6	0.0	—	4.6	4.6	5.0	6.4	7.7	7.9	7.3	7.0	6.5	5.2	-1.2
Black	—	0.5	0.4	0.5	0.5	0.6	0.6	0.6	0.5	0.5	0.5	0.0	—	0.2	0.5	0.9	1.0	0.8	0.9	1.0	0.9	0.9	0.9	0.0
Hispanic	—	3.3	3.7	3.6	3.3	3.5	3.9	4.2	3.9	3.5	3.2	-0.3	—	3.2	4.1	5.0	5.7	6.1	6.7	6.6	5.6	4.6	3.7	-0.9

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-12
LSD: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	7.2	6.4	5.5	6.3	6.6	6.5	6.5	6.1	5.4	4.7	4.4	4.5	5.2	4.8	4.9	5.4	5.2	5.6	6.8	6.9	8.4	8.8	8.4	7.6	8.1	6.6	6.6	0.0
Gender:																												
Male	9.6	7.9	7.1	7.8	8.0	8.1	8.0	7.4	6.7	5.8	5.9	5.5	6.4	6.5	6.5	7.1	6.8	6.7	8.4	8.4	10.7	10.9	10.3	9.3	10.0	7.6	7.9	+0.3
Female	5.6	4.6	3.9	4.5	4.8	4.8	4.7	4.3	3.8	3.1	2.8	3.4	3.9	3.0	3.2	3.6	3.4	4.4	5.1	5.3	5.8	6.5	6.2	5.7	6.1	5.3	5.0	-0.2
College Plans:																												
None or under 4 years	—	7.5	6.7	7.2	8.0	8.2	8.0	7.5	6.9	6.1	5.6	5.9	6.6	5.7	6.5	6.2	6.4	7.6	7.5	7.7	11.2	11.4	10.3	10.9	9.4	8.7	8.2	-0.5
Complete 4 years	—	4.7	4.0	4.6	4.5	4.7	5.0	4.3	3.8	3.1	3.4	3.3	4.3	4.1	4.2	4.8	4.7	4.8	6.4	6.3	7.3	7.7	7.4	6.3	7.3	5.6	5.7	+0.2
Region:																												
Northeast	8.5	8.0	7.2	8.0	7.9	6.8	9.0	8.0	5.6	7.0	5.4	5.1	5.3	4.7	5.1	5.9	6.1	6.6	8.6	8.2	8.8	11.9	11.8	8.2	7.8	7.1	6.7	-0.4
North Central	8.7	7.0	6.5	7.9	7.9	8.5	7.8	7.3	7.0	4.4	5.3	5.3	5.7	4.7	6.0	5.3	5.9	5.5	6.3	7.3	8.3	7.7	7.0	7.6	9.1	5.9	8.6	+2.7s
South	5.4	4.7	3.7	3.7	3.4	4.3	3.4	3.9	4.4	3.5	2.8	2.6	4.2	4.7	4.2	4.7	3.4	4.4	5.5	6.3	8.1	7.9	8.1	7.4	7.7	6.0	4.7	-1.3
West	7.6	5.9	5.0	5.8	8.3	6.5	6.3	4.8	4.2	4.5	4.6	5.9	6.2	5.2	4.4	6.4	6.5	7.0	8.5	6.2	8.5	8.8	6.9	7.1	7.7	7.9	6.6	-1.3
Population Density:																												
Large MSA	9.4	7.9	6.4	7.2	7.6	7.3	8.0	7.3	5.7	4.7	4.1	4.4	5.6	5.2	4.6	5.2	4.3	5.7	6.7	7.3	9.7	9.0	7.7	7.2	6.8	6.7	7.7	+1.0
Other MSA	7.4	6.8	5.6	6.1	7.3	6.8	6.9	6.3	6.0	4.9	4.8	4.9	5.4	5.6	5.3	6.1	7.0	5.8	7.6	7.9	8.7	10.0	9.3	8.4	9.2	6.9	6.4	-0.5
Non-MSA	5.7	4.8	4.8	5.8	4.9	5.6	4.9	4.8	4.4	4.2	4.1	4.0	4.4	3.1	4.3	4.2	3.0	5.1	5.6	4.6	6.5	6.5	7.3	6.1	7.4	5.9	5.6	-0.3
Parental Education:[a] (Low)																												
1.0-2.0	6.1	4.8	4.5	5.0	4.5	5.2	4.8	5.0	4.9	4.1	3.0	3.9	4.4	4.1	3.6	3.4	4.3	3.3	4.6	4.4	6.6	6.7	6.8	6.8	8.6	5.6	5.4	-0.2
2.5-3.0	6.5	6.8	5.8	6.1	6.3	6.8	6.5	6.1	5.1	4.8	4.5	4.6	4.9	3.8	4.3	4.4	4.4	5.2	5.6	6.5	8.1	8.2	7.3	7.8	7.6	6.4	6.7	+0.4
3.5-4.0	6.4	6.7	5.6	6.1	6.7	6.7	6.7	6.4	5.7	4.3	4.7	4.6	4.9	4.2	5.1	6.0	5.5	5.7	7.0	7.4	8.6	9.3	8.5	8.2	9.0	6.7	6.3	-0.4
4.5-5.0	7.0	6.4	5.3	6.7	7.5	5.7	6.4	5.7	5.2	4.3	4.8	4.1	5.8	6.2	5.9	6.2	5.3	5.8	8.3	6.9	8.6	8.7	8.6	6.5	8.0	6.0	6.7	+0.7
5.5-6.0 (High)	6.5	6.4	6.1	7.0	7.4	7.2	7.7	6.0	4.8	5.0	3.8	4.7	6.1	6.2	5.5	7.4	7.1	7.0	8.2	7.9	8.3	9.2	9.5	7.3	6.4	7.0	5.6	-1.4
Race (2-year average):[b]																												
White	—	—	6.3	6.3	6.8	7.0	7.2	6.9	6.2	5.5	5.0	4.9	5.4	5.8	5.7	6.1	6.3	6.4	7.4	8.0	8.6	9.7	10.1	9.5	9.1	8.3	7.5	-0.9
Black	—	—	1.3	1.3	1.2	1.1	1.0	0.9	0.9	0.7	0.7	1.0	0.8	0.6	0.7	0.6	0.6	0.6	0.6	0.9	1.0	1.3	1.6	1.1	0.8	1.3	1.3	0.0
Hispanic	—	—	6.1	5.0	4.9	5.2	4.5	5.2	5.0	4.1	3.9	3.9	4.0	3.1	2.3	2.7	3.6	4.1	5.1	5.4	6.4	7.4	6.3	5.9	7.0	7.6	5.8	-1.7

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-13
Hallucinogens Other Than LSD: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[a]	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[a]	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	0.7	1.1	1.0	1.3	1.7	2.0	1.8	1.6	1.5	1.4	1.1	-0.3	1.3	1.4	1.9	2.4	2.8	3.3	3.3	3.4	3.2	3.1	2.8	-0.4
Gender:																								
Male	0.8	1.1	1.2	1.6	1.9	2.1	2.1	1.8	1.8	1.5	1.3	-0.2	1.5	1.6	2.5	3.0	3.4	3.8	4.1	3.9	4.1	3.8	3.1	-0.8
Female	0.6	1.0	0.9	0.9	1.4	1.7	1.4	1.4	1.1	1.3	1.1	-0.3	1.1	1.1	1.2	1.7	2.1	2.7	2.5	2.8	2.3	2.4	2.4	0.0
College Plans:																								
None or under 4 yrs.	1.7	3.6	2.9	3.6	4.8	5.2	4.7	5.1	5.3	3.9	3.7	-0.3	2.5	2.7	3.7	4.8	5.3	6.2	4.8	7.3	6.7	6.1	6.5	+0.5
Complete 4 yrs.	0.5	0.7	0.7	1.0	1.3	1.4	1.4	1.2	1.0	1.2	0.9	-0.3	1.1	1.1	1.5	1.9	2.3	2.7	3.0	2.6	2.6	2.6	2.1	-0.5
Region:																								
Northeast	0.4	0.6	0.7	1.4	1.8	2.1	1.7	1.2	1.4	1.3	0.5	-0.7	1.4	0.7	2.3	3.2	3.0	3.9	3.2	4.7	4.5	3.4	2.0	-1.4
North Central	0.6	1.3	0.6	1.1	1.6	1.8	1.8	1.9	1.7	1.8	1.4	-0.4	1.0	1.2	1.7	1.9	2.2	3.2	3.4	3.2	2.8	3.3	2.2	-1.0
South	0.7	1.0	1.0	1.0	1.5	1.7	1.4	1.8	1.6	1.3	1.4	+0.1	1.3	1.2	1.5	2.1	2.7	3.1	3.1	3.2	2.7	2.9	2.8	-0.1
West	1.4	1.3	1.9	1.9	1.9	2.6	2.7	1.3	1.1	1.4	0.9	-0.5	1.6	2.6	2.5	3.0	3.5	3.0	3.6	2.5	3.3	3.0	4.6	+1.6
Population Density:																								
Large MSA	0.7	0.8	0.7	1.6	1.6	1.8	1.4	1.3	1.1	1.2	1.0	-0.2	1.4	1.5	1.9	2.4	2.7	3.4	3.3	3.1	3.1	3.9	2.3	-1.5
Other MSA	0.7	1.3	1.3	1.4	1.8	2.2	1.9	1.6	1.5	1.7	1.1	-0.6	1.4	1.4	1.9	2.5	3.0	3.5	3.2	3.4	3.5	2.9	2.7	-0.2
Non-MSA	0.7	1.0	0.9	0.8	1.5	1.7	1.9	2.0	1.9	1.3	1.5	+0.2	1.0	1.2	2.0	2.3	2.5	2.7	3.5	3.5	2.7	2.8	3.4	+0.6
Parental Education:[b]																								
1.0-2.0 (Low)	1.5	1.8	1.4	1.6	2.4	2.2	2.6	2.7	2.6	2.5	1.8	-0.6	1.5	1.5	2.0	2.6	3.3	3.4	2.4	2.9	3.4	2.5	4.5	+2.0
2.5-3.0	0.8	0.7	1.1	1.1	1.7	2.1	2.0	1.3	1.9	1.5	1.6	+0.1	1.2	1.0	1.4	1.8	2.7	3.4	2.7	4.2	3.0	2.6	3.1	+0.5
3.5-4.0	0.4	1.2	1.2	1.2	1.8	2.0	1.6	1.8	1.3	1.3	1.1	-0.1	1.3	1.7	2.3	2.3	3.0	3.2	3.6	3.0	2.8	3.2	3.7	+0.5
4.5-5.0	0.8	0.9	0.7	1.5	1.6	2.0	1.6	1.5	0.9	1.1	1.0	0.0	1.2	1.5	1.9	2.6	2.5	3.3	3.7	3.0	3.7	3.7	1.7	-2.1ss
5.5-6.0 (High)	0.8	1.3	0.9	1.5	1.7	1.4	1.9	1.9	1.5	2.0	0.0	-2.0sss	1.8	1.1	2.1	2.8	2.5	3.5	3.6	3.7	3.7	3.7	1.2	-2.5ss
Race (2-year average):[c]																								
White	—	0.9	1.0	1.2	1.7	2.1	2.1	1.8	1.6	1.6	1.4	-0.2	—	1.5	1.8	2.3	2.8	3.4	3.9	4.0	4.0	3.8	3.4	-0.4
Black	—	0.4	0.5	0.5	0.4	0.4	0.3	0.3	0.3	0.3	0.3	-0.1	—	0.1	0.4	0.7	0.7	0.4	0.3	0.4	0.5	0.6	1.1	+0.5
Hispanic	—	1.5	1.5	1.5	1.8	2.1	2.0	2.2	2.2	1.8	1.2	-0.6	—	1.3	1.5	1.9	2.0	2.1	2.4	2.8	2.6	2.0	1.6	-0.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-14
Hallucinogens Other Than LSD: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001[a]	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	9.4	7.0	6.9	7.3	6.8	6.2	5.6	4.7	4.1	3.8	3.6	3.0	3.2	2.1	2.2	2.1	2.0	1.7	2.2	3.1	3.8	4.4	4.6	4.6	4.3	4.4	4.4	0.0
Gender:																												
Male	12.1	8.8	8.9	8.8	8.0	8.0	6.9	5.7	4.9	4.8	4.6	3.4	3.7	2.7	3.1	3.0	2.7	2.3	3.0	4.3	5.3	5.7	5.9	6.0	5.4	5.8	5.8	0.0
Female	7.5	5.0	4.9	5.5	5.3	4.2	4.0	3.6	3.1	2.7	2.5	2.5	2.6	1.4	1.1	1.1	1.3	1.2	1.3	1.9	2.1	2.8	3.2	3.0	3.1	2.9	2.9	0.0
College Plans:																												
None or under 4 years	—	8.3	8.6	8.1	7.6	6.7	6.0	5.1	4.8	4.5	4.1	3.3	3.5	2.5	2.7	2.1	2.4	2.2	2.5	3.2	4.4	5.1	4.7	6.1	4.4	5.6	4.7	-0.9
Complete 4 years	—	5.2	4.9	5.7	5.3	5.1	5.0	4.1	3.1	3.0	2.9	2.5	2.8	1.8	1.9	1.9	1.9	1.5	2.0	2.9	3.4	4.0	4.4	3.9	4.0	3.8	4.0	+0.2
Region:																												
Northeast	12.0	7.8	8.2	10.3	10.2	10.0	9.0	8.1	6.1	8.4	7.1	5.1	4.8	2.6	2.5	2.9	3.5	2.5	2.6	5.1	5.3	6.1	6.6	6.3	5.5	5.0	7.4	+2.4
North Central	11.3	7.9	7.9	7.6	6.8	6.7	5.7	4.8	4.4	2.9	3.1	2.7	3.5	1.6	2.3	1.7	1.9	1.8	2.0	3.1	3.2	3.5	2.8	4.1	3.7	3.6	3.9	+0.3
South	7.1	5.7	5.4	4.8	4.1	3.1	2.0	1.8	2.4	1.5	1.5	1.4	1.7	2.0	1.9	1.7	1.0	1.3	1.8	1.9	3.1	3.6	4.0	3.5	3.3	3.3	2.4	-0.8
West	7.7	6.7	6.3	7.2	6.6	5.9	6.9	4.9	4.1	4.5	3.6	3.3	3.3	2.5	2.3	2.6	2.6	1.8	2.9	3.6	4.5	5.4	6.1	5.5	5.7	6.9	5.7	-1.2
Population Density:																												
Large MSA	11.1	7.8	7.5	9.3	8.8	8.5	8.1	7.3	6.6	6.9	6.1	5.1	4.8	3.3	2.6	2.3	1.8	2.1	2.5	3.6	4.9	5.2	4.0	4.4	4.5	5.2	5.7	+0.5
Other MSA	10.7	7.3	7.2	6.9	7.2	6.5	5.0	3.7	4.0	3.1	3.0	2.4	2.5	1.7	2.0	2.4	2.6	1.7	2.2	3.6	3.7	4.7	5.4	5.1	4.2	4.3	4.3	0.0
Non-MSA	6.8	6.1	6.1	6.1	4.7	4.1	4.4	4.0	2.4	2.4	2.4	2.1	2.9	1.6	2.1	1.5	1.2	1.4	2.0	1.8	2.7	3.1	3.6	3.7	4.2	3.8	3.1	-0.6
Parental Education:[b]																												
(Low)																												
1.0-2.0	7.5	5.1	5.4	5.7	4.7	5.8	3.9	3.7	3.6	2.8	2.7	2.3	3.4	2.7	2.0	1.5	1.9	1.3	1.7	2.2	2.7	3.5	2.7	3.7	2.2	3.8	3.0	-0.9
2.5-3.0	8.7	7.6	6.9	7.2	6.5	5.9	5.1	4.7	3.6	3.8	3.5	3.1	2.9	1.5	1.8	1.2	1.6	1.6	1.5	2.4	3.4	3.0	3.5	3.9	3.3	3.6	4.8	+1.2
3.5-4.0	9.1	7.5	7.4	7.3	6.6	5.8	5.8	4.8	4.5	3.6	4.1	3.2	3.0	1.8	1.8	2.2	2.0	1.8	2.4	2.9	3.6	4.0	4.8	4.6	5.1	4.2	4.2	+0.0
4.5-5.0	9.7	8.4	7.0	7.8	7.5	6.4	6.0	4.7	3.9	3.8	3.6	2.7	3.3	2.2	2.6	2.8	2.4	1.7	2.7	3.7	4.2	5.2	5.3	5.0	4.4	4.6	4.5	-0.1
5.5-6.0	7.4	7.2	7.8	7.9	9.2	7.2	7.0	6.7	4.6	5.3	2.6	2.8	3.5	3.1	3.3	3.6	2.4	2.1	3.0	4.4	4.1	5.9	5.9	5.4	4.7	5.8	3.5	-2.3
(High)																												
Race (2-year average):[c]																												
White	—	—	7.6	7.6	7.5	7.0	6.3	5.6	4.7	4.3	4.0	3.5	3.4	3.0	2.4	2.4	2.4	2.2	2.2	3.0	3.8	4.4	5.2	5.6	5.2	4.8	4.7	-0.1
Black	—	—	1.6	1.6	1.3	1.4	1.3	1.2	1.6	1.3	0.8	0.9	0.9	0.6	0.5	0.4	0.3	0.3	0.5	0.7	0.8	0.8	0.7	0.6	0.6	1.0	0.9	-0.2
Hispanic	—	—	5.1	5.2	4.8	4.4	4.5	4.8	4.2	3.4	3.7	3.3	2.1	1.7	1.6	1.5	1.7	1.4	1.4	1.6	2.6	3.5	3.1	2.7	3.0	4.6	4.8	+0.2

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 2001 the question text was changed on half of the questionnaire forms for each grade. "Other psychedelics" was changed to "other hallucinogens" and "shrooms" was added to the list of examples. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" and "hallucinogens" are also affected by these changes.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-15
MDMA (Ecstasy): Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	—	—	—	—	—	2.3	2.3	1.8	1.7	3.1	3.5	+0.5	—	—	—	—	—	4.6	3.9	3.3	4.4	5.4	6.2	+0.8
Gender:																								
Male	—	—	—	—	—	2.2	2.7	2.3	1.7	3.1	3.4	+0.3	—	—	—	—	—	4.9	4.7	3.5	4.7	5.7	7.6	+1.8
Female	—	—	—	—	—	2.3	2.0	1.3	1.7	3.0	3.7	+0.7	—	—	—	—	—	4.2	3.1	2.9	4.2	4.8	4.9	0.0
College Plans:																								
None or under 4 yrs.	—	—	—	—	—	4.8	6.1	4.8	5.3	6.5	9.2	+2.7	—	—	—	—	—	7.7	7.5	5.4	8.5	10.7	13.6	+2.9
Complete 4 yrs.	—	—	—	—	—	1.9	2.0	1.5	1.2	2.7	2.9	+0.2	—	—	—	—	—	4.0	3.3	2.9	3.7	4.5	5.1	+0.6
Region:																								
Northeast	—	—	—	—	—	2.1	1.5	1.6	1.8	2.4	3.8	+1.4	—	—	—	—	—	4.4	3.0	3.8	7.0	6.4	8.2	+1.8
North Central	—	—	—	—	—	1.7	1.7	1.7	1.4	3.5	2.9	-0.6	—	—	—	—	—	3.6	3.2	2.2	2.3	5.2	4.8	-0.3
South	—	—	—	—	—	2.8	2.3	2.7	1.8	3.2	3.7	+0.6	—	—	—	—	—	5.6	5.0	4.1	4.1	5.2	5.9	+0.8
West	—	—	—	—	—	2.3	3.8	0.8	1.7	2.9	3.6	+0.7	—	—	—	—	—	4.1	3.7	2.7	4.4	5.0	6.8	+1.8
Population Density:																								
Large MSA	—	—	—	—	—	2.9	1.8	1.8	1.6	3.0	3.1	0.0	—	—	—	—	—	5.6	4.0	2.5	5.2	7.0	7.3	+0.3
Other MSA	—	—	—	—	—	2.5	3.1	2.1	1.8	3.4	4.3	+1.0	—	—	—	—	—	4.6	3.6	4.1	4.7	5.3	5.5	+0.2
Non-MSA	—	—	—	—	—	1.2	1.5	1.5	1.6	2.5	2.5	0.0	—	—	—	—	—	3.3	4.2	2.7	2.8	3.7	6.3	+2.6
Parental Education:[a]																								
1.0-2.0 (Low)	—	—	—	—	—	2.9	2.2	2.1	2.5	4.2	5.8	+1.6	—	—	—	—	—	4.8	3.0	1.9	3.7	7.0	7.2	+0.2
2.5-3.0	—	—	—	—	—	2.2	2.4	1.4	2.0	3.9	4.3	+0.3	—	—	—	—	—	4.7	3.9	3.1	4.4	4.9	6.5	+1.6
3.5-4.0	—	—	—	—	—	2.2	2.9	2.6	1.5	2.8	2.4	-0.4	—	—	—	—	—	4.7	5.2	4.3	4.0	6.3	7.0	+0.7
4.5-5.0	—	—	—	—	—	2.6	2.0	1.4	1.2	3.1	3.3	+0.2	—	—	—	—	—	4.2	2.5	2.9	4.3	5.0	5.3	+0.3
5.5-6.0 (High)	—	—	—	—	—	2.4	2.7	2.5	2.3	2.0	3.0	+1.1	—	—	—	—	—	5.3	4.0	4.4	5.6	4.8	5.8	+1.1
Race (2-year average):[b]																								
White	—	—	—	—	—	—	2.7	2.4	1.9	2.5	3.2	+0.8	—	—	—	—	—	—	4.8	4.0	4.4	5.3	6.0	+0.7
Black	—	—	—	—	—	—	0.3	0.4	0.5	0.6	1.1	+0.5	—	—	—	—	—	—	0.8	1.2	1.3	1.5	2.2	+0.6
Hispanic	—	—	—	—	—	—	2.5	1.7	1.9	3.3	5.3	+2.0	—	—	—	—	—	—	3.6	2.3	2.4	4.6	5.4	+0.8

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of four forms; N is one-third of N indicated in Table D-58.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-16
MDMA (Ecstasy): Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	*15400*	*14300*	*15400*	*15200*	*13600*	*12800*	*12800*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.6	4.0	3.6	5.6	8.2	9.2	+1.0
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.8	5.6	4.8	5.6	8.1	10.5	+2.4
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	2.5	2.7	5.6	8.2	8.0	-0.2
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.9	3.8	4.7	4.2	8.5	9.8	+1.3
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	3.9	3.3	6.2	8.0	8.7	+0.7
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.3	6.9	3.7	9.4	8.8	10.1	+1.3
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.7	1.3	2.7	3.3	5.7	11.8	+6.1s
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.6	4.3	4.0	5.7	5.9	5.7	-0.2
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	4.1	4.0	5.0	14.4	10.3	-4.2
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.6	3.6	3.2	6.1	8.7	10.9	+2.2
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.1	4.6	4.3	6.1	8.4	9.7	+1.3
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	3.4	2.7	4.2	7.4	6.4	-1.0
Parental Education:[a]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.5	3.5	4.2	6.8	7.3	3.8	-3.5
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.0	3.1	3.2	5.1	7.7	10.3	+2.6
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.9	3.8	3.2	5.7	6.2	8.4	+2.2
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	2.9	4.3	6.2	8.3	11.2	+3.0
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.1	8.7	3.5	4.7	10.6	8.1	-2.5
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.2	4.7	5.1	7.6	9.6	+2.0
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.4	0.4	0.5	1.3	2.4	+1.1
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.7	6.0	10.6	10.2	-0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of six forms; N is one-sixth of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

CAUTION: **Limited sample sizes (see "Notes" above). Use caution in interpreting subgroup trends.**

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-17
Cocaine: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percentage who used in last twelve months																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	1.1	1.5	1.7	2.1	2.6	3.0	2.8	3.1	2.7	2.6	2.5	-0.1	2.2	1.9	2.1	2.8	3.5	4.2	4.7	4.7	4.9	4.4	3.6	-0.8
Gender:																								
Male	1.4	1.5	1.9	2.1	2.5	2.7	3.1	2.9	2.8	2.6	2.4	-0.1	2.2	2.0	2.5	3.1	3.5	4.5	4.7	4.9	5.2	4.7	3.8	-0.8
Female	0.9	1.5	1.5	2.1	2.6	3.1	2.5	3.1	2.7	2.6	2.6	+0.1	2.2	1.7	1.6	2.5	3.3	4.0	4.6	4.4	4.6	4.1	3.2	-0.9
College Plans:																								
None or under 4 yrs.	3.2	4.8	5.4	6.6	7.0	7.9	7.5	9.4	8.1	7.5	7.0	-0.5	4.7	4.0	5.1	6.6	7.2	10.0	10.4	10.7	11.6	9.7	9.1	-0.5
Complete 4 yrs.	0.8	1.0	1.1	1.5	2.0	2.2	2.2	2.3	2.0	2.0	2.0	0.0	1.7	1.4	1.4	2.0	2.8	3.2	3.7	3.6	3.8	3.5	2.7	-0.8s
Region:																								
Northeast	1.3	0.8	1.0	2.2	2.2	2.6	2.4	1.9	2.2	1.6	1.9	+0.3	1.5	1.0	2.0	2.4	2.5	3.0	3.0	4.9	4.6	3.1	2.3	-0.8
North Central	0.9	1.4	1.0	1.2	2.6	2.9	2.6	2.7	2.6	2.9	2.3	-0.6	1.7	1.7	1.4	2.2	2.9	4.1	4.0	3.7	4.4	4.6	3.4	-1.1
South	1.1	1.7	2.1	2.5	2.4	2.7	2.6	3.8	3.1	2.2	3.2	+0.9	2.0	1.8	1.9	2.6	3.5	4.2	5.4	4.3	5.2	4.2	3.8	-0.4
West	1.5	2.0	2.7	2.3	3.3	3.7	3.7	3.3	2.7	3.7	2.4	-1.3	3.6	3.2	3.7	4.7	5.3	5.9	6.4	6.4	5.3	5.7	4.9	-0.8
Population Density:																								
Large MSA	1.1	1.4	1.3	1.9	2.4	2.8	2.4	2.3	2.1	2.3	2.1	-0.2	1.9	1.6	1.6	2.3	3.4	3.8	4.5	4.3	4.1	4.3	3.2	-1.1
Other MSA	1.1	1.7	2.2	2.5	2.8	3.2	2.9	3.3	2.8	2.5	2.8	+0.3	2.7	2.1	2.3	3.1	3.5	4.7	4.3	4.7	5.1	4.2	3.7	-0.6
Non-MSA	1.2	1.3	1.2	1.4	2.4	2.7	3.0	3.4	3.2	3.1	2.5	-0.6	1.6	1.7	2.1	2.7	3.6	3.7	5.7	5.2	5.4	4.7	3.8	-0.9
Parental Education:[a]																								
1.0-2.0 (Low)	2.4	3.2	2.9	3.5	4.9	3.9	4.7	6.3	5.6	5.3	4.4	-0.9	3.3	3.5	3.2	3.8	5.3	7.4	6.3	8.1	8.2	7.7	5.6	-2.1
2.5-3.0	1.4	1.6	2.0	2.3	2.4	3.3	3.0	3.3	3.1	2.9	2.8	0.0	2.4	1.7	2.2	2.9	4.3	4.5	5.0	5.5	5.9	5.4	5.2	-0.2
3.5-4.0	0.7	1.2	1.8	2.1	2.8	3.3	2.8	3.1	2.8	2.5	2.4	0.0	2.4	2.1	2.5	3.2	3.7	4.3	5.4	4.4	4.7	4.4	2.9	-1.5s
4.5-5.0	0.7	1.0	1.0	1.6	1.9	2.7	2.6	2.2	1.7	1.8	2.1	+0.3	1.6	1.4	1.6	2.1	2.6	3.4	3.7	3.5	3.9	3.2	2.7	-0.6
5.5-6.0 (High)	1.2	1.5	1.1	1.9	2.5	2.5	2.3	2.5	2.5	2.2	1.6	-0.5	1.9	1.5	1.1	1.9	1.9	3.4	3.3	3.2	3.9	2.9	2.0	-1.0
Race (2-year average):[b]																								
White	—	1.2	1.3	1.6	2.3	2.8	3.0	2.8	2.6	2.5	2.5	-0.1	—	2.1	2.0	2.2	3.0	3.8	4.4	4.7	4.9	4.7	3.9	-0.8
Black	—	0.7	0.7	0.7	0.6	0.6	0.5	0.7	0.8	0.8	0.8	0.0	—	0.6	0.6	1.0	0.9	0.7	0.8	1.0	0.9	0.6	0.8	+0.2
Hispanic	—	3.1	4.0	4.5	4.7	4.8	4.3	5.2	5.9	4.7	4.2	-0.5	—	3.7	3.7	4.9	5.5	7.0	8.5	8.3	8.2	8.0	6.6	-1.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-18
Cocaine: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	5.6	6.0	7.2	9.0	12.0	12.3	12.4	11.5	11.4	11.6	13.1	12.7	10.3	7.9	6.5	5.3	3.5	3.1	3.3	3.6	4.0	4.9	5.5	5.7	6.2	5.0	4.8	-0.1
Gender:																												
Male	7.5	7.5	9.3	11.4	14.6	14.8	13.8	13.1	13.2	13.8	14.8	14.3	11.3	9.1	8.1	6.6	4.1	3.7	4.0	4.5	4.8	6.0	6.6	6.8	7.3	5.8	5.4	-0.5
Female	3.9	4.4	4.9	6.5	9.3	9.8	10.4	9.6	9.3	9.1	11.2	10.9	9.2	6.5	4.9	3.8	2.6	2.4	2.3	2.8	3.1	3.5	4.2	4.5	5.0	3.9	4.1	+0.1
College Plans:																												
None or under 4 years	—	6.6	8.1	9.5	13.7	13.2	12.4	12.5	12.2	13.2	14.7	15.7	12.4	9.7	9.3	7.8	4.9	5.1	4.5	5.3	5.6	7.5	8.1	9.7	9.1	7.1	8.2	+1.1
Complete 4 years	—	5.0	5.5	7.7	9.5	10.8	11.5	9.9	9.9	9.7	11.4	10.4	9.0	6.7	5.3	4.1	2.8	2.4	2.8	3.0	3.4	4.0	4.4	4.5	5.4	4.2	3.7	-0.5
Region:																												
Northeast	5.3	6.6	7.9	11.8	13.8	14.2	16.8	16.9	15.2	19.5	20.8	17.9	13.3	9.1	7.3	6.5	3.8	2.8	3.1	3.1	3.8	5.5	6.6	5.9	4.3	4.1	4.8	+0.6
North Central	5.1	5.5	6.3	8.5	10.5	10.9	9.4	9.0	8.0	5.8	8.2	10.1	7.5	6.1	5.3	4.1	3.2	2.5	2.4	3.7	3.4	3.8	4.7	5.8	6.2	4.8	5.7	+0.9
South	5.4	5.1	6.0	6.8	8.5	7.8	6.8	6.3	7.7	7.7	7.5	7.1	7.0	6.2	6.0	4.8	3.0	3.2	3.1	3.4	3.6	4.6	4.8	5.8	6.9	4.7	3.9	-0.8
West	7.8	7.9	10.2	10.7	18.6	20.6	22.1	17.9	19.2	19.3	19.7	20.0	16.4	12.1	8.5	6.6	4.4	4.3	4.9	4.5	5.8	6.1	6.8	5.4	6.9	6.3	5.0	-1.2
Population Density:																												
Large MSA	7.3	8.6	8.6	12.3	16.6	18.7	17.5	17.2	16.9	16.8	18.8	18.8	12.9	9.3	6.4	5.6	4.1	3.6	2.7	3.3	4.4	4.8	4.7	5.4	5.0	4.1	4.3	+0.2
Other MSA	5.9	5.8	7.3	8.9	11.7	11.3	11.5	10.1	11.2	11.0	12.4	12.0	10.1	8.5	7.1	5.4	3.7	3.3	3.9	4.1	3.9	4.9	5.6	5.8	6.6	4.9	5.0	+0.1
Non-MSA	4.3	4.3	5.8	6.4	8.9	8.9	9.4	8.5	7.3	8.3	9.2	9.0	8.1	5.3	5.4	4.8	2.5	2.4	2.7	3.2	3.9	4.9	6.0	6.0	6.9	6.1	5.2	-0.9
Parental Education:[a] (Low)																												
1.0-2.0	4.5	5.3	5.5	6.3	8.4	9.0	8.3	7.6	9.0	9.4	12.0	10.5	8.7	7.6	6.7	4.7	3.5	3.9	3.5	4.1	4.8	5.3	6.5	6.9	9.0	6.2	5.7	-0.6
2.5-3.0	4.6	6.1	6.8	8.7	11.1	11.2	10.5	11.0	9.8	10.9	12.7	12.9	9.9	7.4	6.4	5.6	3.8	3.3	3.0	4.0	3.9	5.0	5.5	6.3	6.0	4.6	6.0	+1.4
3.5-4.0	4.5	5.9	7.2	9.0	13.2	13.3	13.3	12.5	11.7	12.2	14.0	13.6	11.2	7.2	6.4	5.6	3.7	3.0	3.8	3.8	4.2	5.0	5.6	6.0	6.8	5.0	4.8	-0.2
4.5-5.0	6.3	7.6	8.1	10.4	14.0	13.6	14.9	13.6	13.1	12.2	13.7	12.2	10.0	8.7	7.1	4.4	3.1	2.9	3.0	3.1	3.7	4.8	5.2	5.0	5.4	5.3	4.4	-0.9
5.5-6.0 (High)	5.2	7.1	9.5	11.6	15.2	16.3	16.2	13.8	15.1	13.4	11.9	12.5	10.8	8.1	5.8	5.5	2.4	2.6	2.4	3.3	3.4	4.3	4.4	4.4	5.2	3.9	2.6	-1.3
Race (2-year average):[b]																												
White	—	—	6.5	8.3	10.9	12.8	13.0	12.6	11.8	11.9	13.0	13.5	12.0	9.6	7.6	6.3	4.6	3.3	3.1	3.5	4.0	4.5	5.5	6.3	6.7	6.2	5.5	-0.7
Black	—	—	4.8	4.6	4.6	5.2	4.8	5.2	7.2	6.3	5.3	5.8	4.8	3.8	2.9	1.7	1.5	1.2	0.8	0.9	1.0	0.8	0.9	0.9	0.9	1.0	1.0	0.0
Hispanic	—	—	7.2	7.5	8.9	11.2	12.4	12.1	11.4	13.3	16.3	16.7	14.0	9.9	7.8	7.4	6.1	5.2	5.8	5.4	5.5	7.3	7.6	6.7	7.5	7.6	6.1	-1.6

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-19
Crack: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percentage who used in last twelve months																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	0.7	0.9	1.0	1.3	1.6	1.8	1.7	2.1	1.8	1.8	1.7	-0.1	0.9	0.9	1.1	1.4	1.8	2.1	2.2	2.5	2.4	2.2	1.8	-0.4
Gender:																								
Male	0.8	0.9	1.1	1.3	1.5	1.7	1.8	2.1	1.8	1.7	1.6	-0.1	0.9	0.9	1.3	1.6	1.9	2.1	2.3	2.7	2.5	2.3	1.9	-0.3
Female	0.5	0.9	0.9	1.2	1.6	1.9	1.5	2.1	1.8	1.8	1.8	0.0	0.8	0.9	0.7	1.0	1.6	2.1	2.2	2.2	2.3	2.1	1.7	-0.4
College Plans:																								
None or under 4 yrs.	2.0	2.9	3.4	4.6	4.2	4.9	4.7	7.5	5.3	5.2	4.4	-0.8	2.4	2.1	2.7	3.4	3.7	5.0	4.9	6.0	5.5	5.2	4.7	-0.5
Complete 4 yrs.	0.4	0.6	0.6	0.8	1.3	1.3	1.3	1.5	1.4	1.4	1.4	0.0	0.6	0.6	0.7	0.9	1.5	1.5	1.8	1.9	1.8	1.7	1.4	-0.3
Region:																								
Northeast	0.5	0.4	0.4	1.4	1.4	1.7	1.6	1.2	1.5	1.2	1.2	0.0	0.5	0.4	1.1	1.4	1.1	1.4	1.5	2.6	2.5	1.7	1.0	-0.6
North Central	0.6	1.0	0.8	0.9	1.4	1.9	1.6	1.9	1.9	1.9	1.7	-0.2	0.9	0.9	0.8	1.0	1.5	2.2	2.1	2.1	2.1	1.8	1.8	-0.1
South	0.7	1.0	1.2	1.6	1.4	1.7	1.4	2.5	1.9	1.4	2.0	+0.6s	1.0	0.8	0.9	1.3	1.9	2.0	2.0	1.9	2.0	1.9	1.7	-0.2
West	0.8	1.3	1.4	1.3	2.3	2.1	2.3	2.6	1.8	2.9	1.7	-1.2ss	1.1	1.4	1.7	1.9	2.8	2.8	3.8	3.9	3.2	3.8	3.3	-0.5
Population Density:																								
Large MSA	0.5	0.8	0.7	1.3	1.5	1.8	1.5	1.6	1.2	1.6	1.4	-0.1	0.9	0.8	0.7	0.9	1.9	1.7	2.3	2.2	2.2	2.4	1.9	-0.5
Other MSA	0.7	1.1	1.2	1.5	1.7	2.0	1.8	2.2	2.0	1.8	1.8	0.0	0.9	0.9	1.1	1.5	1.6	2.4	1.7	2.4	2.3	2.0	1.8	-0.1
Non-MSA	0.8	0.8	0.9	1.0	1.4	1.7	1.7	2.6	2.1	2.0	1.8	-0.2	0.9	0.9	1.2	1.6	2.3	1.9	3.3	3.1	2.8	2.5	1.8	-0.7
Parental Education:[a]																								
1.0-2.0 (Low)	1.7	2.2	1.8	2.8	3.0	2.7	3.0	5.0	3.6	3.7	3.2	-0.5	1.3	1.7	1.8	1.9	3.0	3.9	3.4	4.5	3.4	4.8	3.0	-1.8
2.5-3.0	0.7	0.8	1.0	1.4	1.2	2.1	2.0	2.2	2.0	2.1	1.8	-0.2	1.0	0.8	1.0	1.1	2.4	2.5	2.4	3.1	2.9	2.9	2.5	-0.5
3.5-4.0	0.4	0.7	1.2	0.9	1.7	2.0	1.4	2.1	2.0	1.8	1.3	-0.5	0.9	1.0	1.4	1.5	1.7	1.9	2.6	2.0	2.5	2.2	1.4	-0.8s
4.5-5.0	0.4	0.6	0.5	1.1	1.3	1.5	1.5	1.6	1.0	1.0	1.5	+0.5	0.7	0.6	0.7	1.0	1.3	1.4	1.8	2.0	1.9	1.1	1.6	+0.5
5.5-6.0 (High)	0.8	1.0	0.6	1.4	1.6	1.5	1.5	1.6	1.9	1.8	1.3	-0.4	0.7	0.9	0.5	1.1	1.1	1.8	1.2	1.8	1.8	1.4	1.2	-0.2
Race (2-year average):[b]																								
White	—	0.7	0.8	1.0	1.4	1.7	1.7	1.7	1.8	1.7	1.7	-0.1	—	0.9	0.9	1.1	1.5	1.9	2.2	2.3	2.4	2.2	1.8	-0.4
Black	—	0.4	0.4	0.5	0.5	0.4	0.4	0.5	0.5	0.4	0.5	+0.1	—	0.3	0.4	0.8	0.6	0.4	0.4	0.5	0.5	0.5	0.7	+0.2
Hispanic	—	1.9	2.0	2.1	2.7	3.0	2.8	3.6	3.9	2.9	2.6	-0.3	—	1.5	1.7	1.9	2.5	3.7	3.7	4.1	4.4	4.0	3.7	-0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-20
Crack: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	4.1	3.9	3.1	3.1	1.9	1.5	1.5	1.5	1.9	2.1	2.1	2.4	2.5	2.7	2.2	2.1	0.0
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	4.2	4.6	4.0	4.3	2.3	1.8	1.7	1.9	2.4	2.5	2.6	3.0	3.1	2.9	2.5	2.4	-0.1
Female	—	—	—	—	—	—	—	—	—	—	—	3.6	3.0	2.0	1.8	1.4	1.0	1.0	1.1	1.3	1.5	1.6	1.8	2.0	2.2	1.7	1.8	+0.1
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	5.2	5.1	4.1	3.8	3.5	2.3	2.6	2.7	3.3	3.0	4.0	4.3	4.6	5.0	3.5	4.4	+0.9
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	2.8	2.7	2.3	2.7	1.2	1.1	1.0	1.2	1.4	1.7	1.6	1.7	1.9	1.9	1.7	1.5	-0.2
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	6.0	4.0	2.3	3.3	2.0	1.3	1.3	1.2	1.5	1.6	2.1	2.6	3.0	2.4	1.8	2.0	+0.3
North Central	—	—	—	—	—	—	—	—	—	—	—	3.1	3.5	2.4	2.2	1.6	1.5	1.4	1.3	2.2	2.0	2.3	2.2	2.6	2.8	2.0	2.6	+0.6
South	—	—	—	—	—	—	—	—	—	—	—	1.6	2.8	2.6	3.3	1.8	1.2	1.2	1.5	1.6	1.7	1.7	1.8	2.0	2.3	1.8	1.2	-0.6
West	—	—	—	—	—	—	—	—	—	—	—	7.5	6.1	5.6	3.8	2.7	1.8	2.1	2.1	2.3	3.5	2.6	3.4	3.2	3.4	3.2	3.0	-0.2
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	5.9	4.7	3.9	3.4	1.6	1.2	1.3	1.3	1.5	2.0	2.1	2.2	2.5	2.0	1.8	1.5	-0.2
Other MSA	—	—	—	—	—	—	—	—	—	—	—	3.5	3.5	3.2	3.3	2.0	1.7	1.6	1.8	2.1	2.1	1.9	2.3	2.4	2.5	2.1	2.2	+0.1
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	3.5	3.7	2.0	2.2	2.0	1.2	1.3	1.4	1.9	2.1	2.5	2.8	2.9	3.6	2.8	2.8	0.0
Parental Education:[a] (Low)																												
1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	1.2	3.6	3.3	3.1	2.2	1.6	1.9	2.6	2.7	3.4	3.4	3.6	3.9	3.2	2.8	3.8	+0.9
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	5.3	4.2	2.6	3.1	2.2	1.5	1.9	1.6	2.2	2.3	2.4	2.5	2.8	2.8	2.1	2.6	+0.5
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	4.0	4.0	3.4	2.8	1.8	1.7	1.3	1.5	1.8	1.7	2.2	2.0	2.4	3.0	2.2	1.8	-0.4
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	2.9	3.4	3.1	2.6	1.1	0.9	1.0	1.4	1.1	1.9	1.6	2.5	2.1	2.2	1.8	1.9	+0.1
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	3.7	2.4	2.1	3.7	1.8	1.1	0.8	1.0	1.8	1.5	1.6	1.8	2.1	1.6	2.2	1.2	-1.0s
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	3.8	3.4	3.1	2.1	1.6	1.3	1.3	1.6	1.9	2.0	2.2	2.6	2.8	2.5	2.2	-0.3
Black	—	—	—	—	—	—	—	—	—	—	—	—	1.9	2.5	2.0	1.3	1.0	0.6	0.6	0.9	1.0	0.7	0.5	0.3	0.4	0.5	0.5	+0.1
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	5.5	3.7	3.2	4.2	3.4	2.7	2.5	2.4	3.1	4.1	4.2	3.9	3.5	3.4	3.1	-0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of five forms in 1986; N is one-fifth of N indicated in Table D-59. Data based on two forms in 1987–89; N is two-fifths of N indicated in 1987–88 and two-sixths of N indicated in 1989 in Table D-59. Data based on six questionnaire forms beginning in 1990.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-21
Other Cocaine: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	17500	18600	18300	17300	17500	17800	18600	18100	16700	16700	16200	
Total	1.0	1.2	1.3	1.7	2.1	2.5	2.2	2.4	2.3	1.9	1.9	0.0
Gender:												
Male	1.1	1.2	1.5	1.7	2.0	2.2	2.5	2.3	2.3	1.9	1.8	-0.2
Female	0.8	1.2	1.2	1.8	2.2	2.6	1.9	2.4	2.2	1.8	2.0	+0.2
College Plans:												
None or under 4 yrs.	2.7	4.2	4.1	5.6	5.9	6.6	6.0	7.7	7.1	6.1	5.3	-0.8
Complete 4 yrs.	0.6	0.7	0.9	1.2	1.6	1.8	1.7	1.8	1.7	1.4	1.5	+0.1
Region:												
Northeast	1.2	0.7	0.9	1.9	1.8	2.1	1.6	1.4	1.7	1.1	1.6	+0.5
North Central	0.6	1.0	0.7	0.9	2.0	2.4	2.0	1.9	2.2	2.3	1.6	-0.7
South	1.0	1.5	1.6	2.0	2.0	2.3	2.1	3.1	2.6	1.7	2.4	+0.7
West	1.3	1.5	2.1	2.0	2.7	3.1	2.9	2.5	2.2	2.5	1.7	-0.8
Population Density:												
Large MSA	0.9	1.1	1.0	1.6	2.0	2.5	1.7	1.8	1.8	1.6	1.6	0.0
Other MSA	0.9	1.4	1.8	2.1	2.1	2.6	2.2	2.5	2.3	1.8	2.2	+0.4
Non-MSA	1.1	0.9	0.7	1.2	2.2	2.2	2.5	2.8	2.8	2.5	1.6	-0.8
Parental Education:[a]												
1.0-2.0 (Low)	2.1	2.7	2.2	3.1	4.3	3.2	3.5	4.7	5.1	4.2	3.7	-0.6
2.5-3.0	1.2	1.1	1.5	2.0	2.0	2.6	2.4	2.5	2.8	2.1	1.9	-0.2
3.5-4.0	0.6	1.0	1.5	1.9	2.2	2.8	2.1	2.4	2.3	1.9	1.8	0.0
4.5-5.0	0.6	0.8	0.8	1.1	1.6	2.4	1.9	1.8	1.3	1.4	1.6	+0.2
5.5-6.0 (High)	1.0	1.2	0.8	1.2	2.0	1.9	1.7	1.8	1.8	1.3	1.1	-0.2
Race (2-year average):[b]												
White	—	0.9	1.0	1.2	1.8	2.4	2.5	2.2	2.1	1.9	1.8	-0.1
Black	—	0.6	0.5	0.6	0.5	0.4	0.3	0.5	0.7	0.6	0.5	-0.1
Hispanic	—	2.6	3.3	4.0	4.3	4.1	3.3	4.0	4.9	3.9	3.2	-0.7

	10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	14800	14800	15300	15800	17000	15600	15500	15000	13600	14300	14000	
Total	2.1	1.7	1.8	2.4	3.0	3.5	4.1	4.0	4.4	3.8	3.0	-0.8s
Gender:												
Male	2.0	1.9	2.2	2.7	3.1	3.7	4.1	4.1	4.6	4.2	3.3	-0.9
Female	2.1	1.5	1.4	2.1	2.9	3.3	4.0	3.8	4.1	3.4	2.6	-0.8
College Plans:												
None or under 4 yrs.	4.4	3.3	4.5	5.9	6.3	8.4	9.0	9.3	10.5	8.3	8.2	-0.1
Complete 4 yrs.	1.6	1.3	1.3	1.7	2.5	2.7	3.2	3.0	3.4	3.0	2.1	-0.9s
Region:												
Northeast	1.3	1.0	1.8	2.0	2.2	2.2	2.5	4.3	4.1	2.5	2.0	-0.5
North Central	1.6	1.3	1.3	1.8	2.5	3.4	3.4	3.1	3.9	4.0	3.0	-1.1
South	1.9	1.6	1.7	2.2	2.9	3.5	4.8	3.7	4.7	3.9	3.2	-0.7
West	3.4	3.1	3.2	4.3	4.8	5.2	5.3	5.2	4.6	4.6	3.9	-0.7
Population Density:												
Large MSA	1.6	1.5	1.4	1.9	2.8	3.3	3.9	3.8	3.7	3.7	2.5	-1.2
Other MSA	2.6	2.0	2.0	2.7	3.1	3.9	3.8	4.0	4.5	3.7	3.2	-0.5
Non-MSA	1.4	1.4	1.9	2.5	3.1	3.2	4.9	4.2	4.8	4.0	3.2	-0.8
Parental Education:[a]												
1.0-2.0 (Low)	3.1	2.7	2.7	3.1	5.0	6.1	5.5	6.7	7.6	6.3	4.8	-1.5
2.5-3.0	2.2	1.6	2.0	2.6	3.6	3.6	4.3	4.5	5.1	4.4	4.5	0.0
3.5-4.0	2.2	2.0	2.2	2.7	3.3	3.8	4.6	4.0	4.2	4.0	2.5	-1.5ss
4.5-5.0	1.6	1.3	1.4	1.8	2.2	3.0	3.3	3.0	3.5	3.0	2.2	-0.8
5.5-6.0 (High)	1.8	1.3	0.9	1.6	1.7	2.8	2.9	2.5	3.5	2.7	1.4	-1.4s
Race (2-year average):[b]												
White	—	1.9	1.8	1.9	2.6	3.2	3.7	4.1	4.3	4.1	3.4	-0.8
Black	—	0.5	0.5	0.9	0.8	0.6	0.6	0.9	0.8	0.5	0.5	0.0
Hispanic	—	3.4	3.4	4.6	5.2	6.1	7.5	7.0	6.8	7.1	5.6	-1.5

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-22
Other Cocaine: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	9.8	7.4	5.2	4.6	3.2	2.6	2.9	3.0	3.4	4.2	5.0	4.9	5.8	4.5	4.4	-0.1
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	10.1	8.0	6.5	5.8	3.7	3.1	3.7	3.7	4.0	4.9	5.7	5.6	7.1	5.5	4.9	-0.6
Female	—	—	—	—	—	—	—	—	—	—	—	—	9.1	6.2	4.0	3.2	2.4	2.0	2.0	2.3	2.5	3.2	4.0	3.9	4.2	3.4	3.7	+0.4
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	9.8	6.0	7.3	6.3	4.0	4.0	3.9	4.3	4.5	5.7	7.0	8.9	7.6	6.7	7.4	+0.7
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	8.3	6.7	4.2	3.7	2.8	2.0	2.5	2.5	2.9	3.5	4.1	3.5	5.2	3.7	3.4	-0.4
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	12.9	7.0	4.9	5.6	3.4	2.8	2.3	2.8	4.2	5.2	5.9	4.7	4.1	3.7	4.4	+0.7
North Central	—	—	—	—	—	—	—	—	—	—	—	—	8.2	5.6	4.8	3.7	2.9	2.2	2.3	3.5	2.7	3.2	4.1	5.3	5.7	4.5	5.6	+1.2
South	—	—	—	—	—	—	—	—	—	—	—	—	5.8	5.8	4.6	4.1	2.8	2.5	2.6	2.6	3.1	4.2	4.6	4.9	6.6	4.0	3.9	-0.1
West	—	—	—	—	—	—	—	—	—	—	—	—	15.3	13.4	7.5	6.1	3.9	3.1	4.6	3.5	4.0	4.5	6.2	4.4	6.1	5.9	3.5	-2.4
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	13.3	9.8	5.6	5.0	3.7	3.1	2.6	2.6	3.7	3.9	4.2	4.8	4.8	3.7	4.1	+0.4
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	8.9	7.8	5.4	4.7	3.3	2.5	3.6	3.5	3.3	4.4	5.2	4.9	6.0	4.5	4.3	-0.2
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	8.0	4.5	4.4	4.1	2.5	2.3	2.0	2.6	3.1	4.2	5.6	4.9	6.7	5.4	5.0	-0.4
Parental Education:[a]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	5.3	4.9	3.3	3.4	3.5	3.7	3.9	2.7	2.9	5.2	6.4	5.5	7.4	5.4	3.7	-1.7
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	10.5	6.5	4.6	5.0	3.5	2.3	2.3	3.2	3.4	3.8	4.9	5.3	5.0	3.8	5.6	+1.7
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	10.5	7.2	5.1	4.7	3.2	2.6	3.3	3.4	3.6	4.6	4.9	5.3	6.9	4.7	4.7	0.0
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	9.0	7.7	6.1	4.1	2.7	2.3	2.9	2.6	3.2	3.9	4.4	4.2	5.5	4.5	3.9	-0.6
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	9.7	9.0	6.5	5.4	2.4	2.0	1.7	3.1	2.7	3.8	4.8	3.5	3.6	4.2	2.2	-2.1
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	9.3	7.0	5.3	4.2	2.9	2.6	2.9	3.3	3.9	5.0	5.6	6.0	5.7	5.0	-0.7
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	1.4	0.7	1.0	1.0	0.7	0.8	0.8	0.7	0.7	0.6	0.8	1.0	0.9	-0.1
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	6.3	5.1	5.1	5.0	4.3	5.1	5.1	4.0	5.6	6.9	6.0	5.8	6.6	5.8	-0.9

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one form in 1987–89; N is one-fifth of N indicated in 1987–88 and one-sixth of N indicated in 1989 in Table D-59. Data based on four of six forms beginning in 1990; N is four-sixths of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-23
Heroin: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995[a]	1996[a]	1997[a]	1998[a]	1999[a]	2000	2001	'00–'01 change	1991	1992	1993	1994	1995[a]	1996[a]	1997[a]	1998[a]	1999[a]	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	0.7	0.7	0.7	1.2	1.4	1.6	1.3	1.3	1.4	1.1	1.0	-0.1	0.5	0.6	0.7	0.9	1.1	1.2	1.4	1.4	1.4	1.4	0.9	-0.4ss
Gender:																								
Male	0.9	0.8	0.8	1.3	1.6	1.5	1.4	1.5	1.4	1.0	1.0	0.0	0.7	0.8	0.9	1.0	1.3	1.5	1.6	1.7	1.7	1.5	1.0	-0.4
Female	0.5	0.7	0.5	0.9	1.2	1.5	1.1	1.1	1.3	1.2	1.0	-0.2	0.4	0.4	0.4	0.8	0.8	0.9	1.3	1.1	1.2	1.2	0.8	-0.4s
College Plans:																								
None or under 4 yrs.	2.1	2.7	2.0	3.9	4.4	4.1	3.4	5.0	3.7	3.5	3.1	-0.4	1.4	1.4	1.9	2.0	2.2	2.4	2.9	2.7	3.4	3.8	2.5	-1.2
Complete 4 yrs.	0.4	0.4	0.5	0.7	1.0	1.1	1.1	0.9	1.1	0.8	0.8	0.0	0.3	0.4	0.4	0.7	0.9	1.0	1.2	1.2	1.1	1.0	0.7	-0.3s
Region:																								
Northeast	0.5	0.6	0.7	1.3	1.4	1.8	1.1	1.1	1.3	1.1	1.1	0.0	0.4	0.6	0.6	0.6	0.9	0.9	1.3	1.8	1.9	1.5	1.0	-0.5
North Central	0.4	0.8	0.5	1.1	1.4	1.6	1.4	1.3	1.6	1.4	1.0	-0.4	0.6	0.6	0.8	0.9	1.0	1.5	1.5	1.4	1.3	1.6	1.1	-0.4
South	0.8	0.7	0.7	1.1	1.5	1.4	1.2	1.4	1.4	0.7	1.2	+0.5s	0.6	0.5	0.6	1.0	1.3	1.4	1.5	1.3	1.4	1.5	0.9	-0.7ss
West	1.0	0.7	1.1	1.1	1.2	1.6	1.4	1.3	1.2	1.4	0.7	-0.7s	0.4	0.8	0.5	1.2	1.0	1.0	1.3	1.1	1.1	0.7	0.7	0.0
Population Density:																								
Large MSA	0.5	0.7	0.7	1.2	1.2	1.4	1.0	1.0	1.3	1.0	0.9	-0.2	0.6	0.6	0.7	0.8	1.0	1.1	1.6	1.2	1.2	1.8	0.9	-0.9ss
Other MSA	0.7	0.8	0.9	1.2	1.5	1.7	1.3	1.3	1.4	1.1	1.0	-0.1	0.5	0.6	0.6	0.9	1.0	1.3	1.3	1.5	1.4	1.2	1.0	-0.2
Non-MSA	0.8	0.7	0.4	1.0	1.5	1.5	1.5	1.6	1.5	1.0	1.1	+0.1	0.4	0.6	0.7	1.0	1.3	1.2	1.6	1.5	1.6	1.2	0.9	-0.3
Parental Education:[b]																								
1.0-2.0 (Low)	1.5	1.4	0.8	2.0	2.6	2.0	2.3	3.5	2.8	1.7	2.6	+0.9	0.4	0.5	1.2	1.3	1.8	1.0	1.3	1.7	2.4	1.3	1.1	-0.2
2.5-3.0	0.9	0.7	0.6	1.1	1.0	1.7	1.4	1.2	1.4	1.5	1.1	-0.4	0.8	0.7	0.7	0.8	1.0	1.2	1.3	1.2	1.5	1.7	1.3	-0.4
3.5-4.0	0.6	0.6	0.7	1.3	1.6	1.7	1.0	1.1	1.2	0.7	1.0	+0.3	0.5	0.6	0.8	0.9	1.2	1.3	1.6	1.6	1.2	1.5	0.6	-0.9ss
4.5-5.0	0.4	0.5	0.8	0.8	1.2	1.4	1.1	1.1	1.1	0.8	0.6	-0.1	0.4	0.5	0.3	0.9	0.9	1.1	1.5	1.3	1.4	1.3	0.8	-0.5
5.5-6.0 (High)	0.5	0.8	0.6	1.3	1.6	1.0	1.5	1.4	1.8	1.0	0.8	-0.2	0.4	0.5	0.8	0.9	0.9	1.5	1.1	1.3	1.2	1.1	0.9	-0.3
Race (2-year average):[c]																								
White	—	0.6	0.6	0.8	1.2	1.6	1.6	1.3	1.2	1.2	1.0	-0.2	—	0.6	0.7	0.8	1.0	1.2	1.4	1.4	1.5	1.5	1.2	-0.3
Black	—	0.4	0.3	0.6	0.7	0.5	0.4	0.5	0.7	0.5	0.6	+0.1	—	0.3	0.4	0.6	0.6	0.2	0.2	0.4	0.5	0.5	0.5	0.0
Hispanic	—	1.4	1.4	1.5	1.8	2.1	1.7	1.7	2.2	2.0	1.4	-0.6	—	0.7	0.7	0.7	1.0	1.0	1.3	1.6	1.7	1.4	1.4	-0.1

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 1995, the heroin question was changed in half of the forms. Separate questions were asked for use with injection and without injection. In 1996, the remaining form was also changed. Data presented here represent the combined data from all forms.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-24
Heroin: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995[a]	Class of 1996[a]	Class of 1997[a]	Class of 1998[a]	Class of 1999[a]	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	1.0	0.8	0.8	0.8	0.5	0.5	0.5	0.6	0.6	0.5	0.6	0.5	0.5	0.5	0.6	0.5	0.4	0.6	0.5	0.6	1.1	1.0	1.2	1.0	1.1	1.5	0.9	-0.6sss
Gender:																												
Male	1.2	1.0	1.2	1.1	0.6	0.6	0.6	0.8	0.7	0.7	0.8	0.7	0.7	0.7	0.9	0.6	0.6	0.8	0.7	0.8	1.4	1.3	1.5	1.4	1.4	1.7	1.3	-0.4
Female	0.8	0.5	0.4	0.6	0.3	0.4	0.3	0.4	0.4	0.3	0.3	0.2	0.3	0.3	0.4	0.3	0.3	0.3	0.3	0.4	0.8	0.7	0.9	0.7	0.8	1.2	0.6	-0.6ss
College Plans:																												
None or under 4 years	—	0.9	1.1	1.0	0.7	0.6	0.5	0.7	0.9	0.6	0.7	0.8	0.5	0.8	0.9	0.6	0.5	0.9	1.0	1.1	1.5	1.8	1.8	1.7	1.3	2.2	1.3	-0.9s
Complete 4 years	—	0.6	0.5	0.6	0.3	0.3	0.5	0.4	0.3	0.4	0.5	0.4	0.4	0.3	0.5	0.4	0.4	0.5	0.4	0.5	0.9	0.8	1.0	0.8	1.0	1.1	0.7	-0.4s
Region:																												
Northeast	1.1	0.7	0.7	0.6	0.6	0.5	0.5	0.9	0.6	0.6	0.8	0.7	0.6	0.5	0.9	0.8	0.2	0.5	0.9	0.7	1.0	1.6	1.7	1.3	1.2	1.0	1.2	+0.1
North Central	1.3	1.0	1.0	0.8	0.5	0.7	0.6	0.5	0.4	0.6	0.6	0.4	0.6	0.3	0.6	0.3	0.8	0.6	0.5	0.9	0.7	0.7	0.9	1.0	0.9	1.4	1.3	-0.1
South	0.9	0.7	0.9	1.1	0.6	0.3	0.5	0.5	0.7	0.5	0.6	0.5	0.4	0.5	0.6	0.5	0.4	0.6	0.4	0.6	1.4	1.0	1.1	1.1	1.3	1.6	0.6	-1.1sss
West	0.7	0.6	0.5	0.8	0.2	0.4	0.5	0.3	0.5	0.4	0.3	0.5	0.5	0.7	0.7	0.3	0.3	0.8	0.5	0.4	1.0	0.9	1.2	0.6	0.9	1.8	0.8	-1.1ss
Population Density:																												
Large MSA	1.3	1.0	0.5	0.7	0.4	0.3	0.3	0.7	0.6	0.6	0.7	0.7	0.3	0.4	0.5	0.4	0.4	0.4	0.6	0.4	1.4	1.1	1.1	0.9	0.8	1.9	1.1	-0.8s
Other MSA	0.9	1.0	0.8	0.8	0.6	0.5	0.5	0.4	0.4	0.4	0.7	0.4	0.6	0.5	0.7	0.5	0.4	0.7	0.5	0.8	0.9	1.1	1.3	1.3	1.3	1.3	0.8	-0.5s
Non-MSA	1.0	0.4	1.1	1.0	0.5	0.6	0.7	0.6	0.7	0.7	0.4	0.5	0.5	0.5	0.8	0.5	0.6	0.7	0.5	0.5	1.0	0.9	1.0	0.6	1.0	1.3	0.9	-0.3
Parental Education:[b]																												
(Low)																												
1.0-2.0	1.2	0.8	0.8	0.8	0.6	0.6	0.4	0.4	0.5	0.6	0.8	0.9	0.5	0.5	0.9	0.8	0.5	0.7	0.3	0.9	1.8	1.1	2.1	1.2	2.3	2.3	1.3	-1.0
2.5-3.0	0.8	0.9	0.8	0.9	0.5	0.6	0.6	0.7	0.6	0.5	0.5	0.4	0.4	0.7	0.7	0.4	0.4	0.6	0.4	0.8	1.1	0.9	1.0	1.0	0.9	1.6	0.5	-1.1sss
3.5-4.0	0.6	0.8	0.9	0.7	0.4	0.4	0.5	0.3	0.5	0.5	0.5	0.5	0.6	0.4	0.6	0.4	0.4	0.6	0.6	0.4	0.9	1.1	1.2	1.2	1.0	1.3	1.0	-0.4
4.5-5.0	1.2	1.4	0.6	0.9	0.6	0.4	0.3	0.6	0.4	0.4	0.7	0.3	0.3	0.3	0.6	0.4	0.6	0.7	0.7	0.3	1.1	1.0	1.1	1.0	1.1	1.5	1.0	-0.5
5.5-6.0	1.2	0.6	1.1	1.0	0.8	0.4	0.7	1.1	0.8	0.5	0.6	0.5	0.7	0.4	0.4	0.5	0.5	0.3	0.4	0.9	1.0	0.8	1.1	0.7	1.1	1.1	0.8	-0.3
(High)																												
Race (2-year average):[c]																												
White	—	—	0.8	0.8	0.6	0.5	0.4	0.5	0.5	0.5	0.5	0.5	0.4	0.4	0.5	0.6	0.5	0.5	0.5	0.5	0.8	1.0	1.2	1.2	1.1	1.3	1.3	0.0
Black	—	—	0.6	0.6	0.5	0.5	0.6	0.7	0.6	0.4	0.5	0.5	0.5	0.7	0.6	0.3	0.2	0.5	0.4	0.3	0.4	0.5	0.5	0.4	0.3	0.5	0.4	-0.1
Hispanic	—	—	1.2	2.0	1.7	0.4	0.3	0.4	0.6	1.1	1.0	0.9	0.9	0.5	0.5	0.6	0.6	0.9	0.7	0.5	1.2	1.5	1.1	0.8	1.0	2.0	1.6	-0.5

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 1995, the heroin question was changed in half of the forms. Separate questions were asked for use with injection and without injection. Data presented here represent the combined data from all forms.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-25
Heroin with a Needle: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	—	—	—	—	0.9	1.0	0.8	0.8	0.9	0.6	0.7	+0.1	—	—	—	—	0.6	0.7	0.7	0.8	0.6	0.5	0.4	-0.1
Gender:																								
Male	—	—	—	—	1.2	1.0	0.8	1.0	1.0	0.7	0.7	0.0	—	—	—	—	0.8	0.8	0.9	1.0	0.8	0.6	0.5	-0.1
Female	—	—	—	—	0.5	1.0	0.7	0.7	0.8	0.6	0.7	+0.2	—	—	—	—	0.4	0.4	0.5	0.5	0.5	0.4	0.3	-0.1
College Plans:																								
None or under 4 yrs.	—	—	—	—	3.2	3.1	2.0	3.1	2.2	2.1	2.2	+0.1	—	—	—	—	1.6	1.4	1.5	1.6	1.7	1.7	1.4	-0.3
Complete 4 yrs.	—	—	—	—	0.6	0.7	0.6	0.6	0.7	0.5	0.6	+0.1	—	—	—	—	0.4	0.5	0.6	0.6	0.5	0.3	0.3	-0.1
Region:																								
Northeast	—	—	—	—	0.8	1.3	0.5	0.6	1.0	0.8	0.9	+0.1	—	—	—	—	0.5	0.3	0.6	0.8	0.7	0.5	0.5	0.0
North Central	—	—	—	—	0.9	1.1	0.7	0.9	1.2	0.9	0.7	-0.2	—	—	—	—	0.6	1.0	0.8	0.9	0.7	0.5	0.5	0.0
South	—	—	—	—	0.8	0.9	0.8	1.0	0.9	0.3	0.9	+0.6sss	—	—	—	—	0.6	0.7	0.8	0.8	0.6	0.6	0.3	-0.3
West	—	—	—	—	1.0	1.0	1.0	0.8	0.7	0.8	0.3	-0.5ss	—	—	—	—	0.5	0.5	0.6	0.6	0.6	0.4	0.5	+0.1
Population Density:																								
Large MSA	—	—	—	—	0.9	0.7	0.6	0.8	0.8	0.7	0.7	0.0	—	—	—	—	0.5	0.5	0.6	0.7	0.6	0.6	0.4	-0.3
Other MSA	—	—	—	—	0.9	1.2	0.8	0.8	0.9	0.6	0.6	0.0	—	—	—	—	0.5	0.7	0.6	0.7	0.5	0.4	0.5	+0.1
Non-MSA	—	—	—	—	0.9	1.1	0.9	1.1	1.1	0.7	1.0	+0.3	—	—	—	—	0.8	0.8	1.1	1.0	1.0	0.6	0.4	-0.2
Parental Education:[a]																								
1.0-2.0 (Low)	—	—	—	—	1.3	0.9	1.5	2.3	2.0	1.2	2.0	+0.8	—	—	—	—	1.6	0.6	0.7	1.3	1.2	1.0	0.5	-0.6
2.5-3.0	—	—	—	—	0.5	1.2	0.8	0.8	0.9	0.5	0.7	+0.2	—	—	—	—	0.5	0.8	0.6	0.6	0.7	0.8	0.7	-0.1
3.5-4.0	—	—	—	—	0.8	1.2	0.6	0.6	0.9	0.4	0.6	+0.2	—	—	—	—	0.7	0.7	0.9	0.9	0.6	0.5	0.2	-0.3
4.5-5.0	—	—	—	—	1.0	0.8	0.7	0.7	0.5	0.4	0.5	+0.1	—	—	—	—	0.4	0.5	0.7	0.6	0.6	0.3	0.3	0.0
5.5-6.0 (High)	—	—	—	—	1.0	0.6	0.9	0.9	1.2	0.9	0.7	-0.2	—	—	—	—	0.3	0.6	0.7	0.8	0.6	0.3	0.5	+0.2
Race (2-year average):[b]																								
White	—	—	—	—	—	1.1	1.0	0.7	0.8	0.7	0.6	-0.1	—	—	—	—	—	0.6	0.7	0.7	0.6	0.5	0.4	-0.1
Black	—	—	—	—	—	0.3	0.2	0.3	0.4	0.3	0.5	+0.2	—	—	—	—	—	0.1	0.1	0.3	0.3	0.3	0.3	+0.1
Hispanic	—	—	—	—	—	1.1	1.0	1.1	1.5	1.2	0.8	-0.4	—	—	—	—	—	0.6	0.6	0.8	1.0	0.9	0.9	0.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of two forms in 1995; N is one-half of N indicated in Table D-58.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-26
Heroin with a Needle: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.5	0.5	0.4	0.4	0.4	0.3	-0.1
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.9	0.9	0.6	0.6	0.6	0.5	0.0
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	0.1	0.2	0.3	0.2	0.2	0.1	-0.1
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	1.2	0.9	0.8	0.5	1.0	0.7	-0.3
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.4	0.4	0.4	0.3	0.4	0.2	0.2	-0.1
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.4	0.6	0.6	0.7	0.3	0.2	0.7	+0.5
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.4	0.8	0.4	0.5	0.4	0.2	-0.1
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.4	0.6	0.3	0.5	0.4	0.8	0.1	-0.7ss
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	0.5	0.5	0.1	0.3	0.1	0.4	+0.2
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.7	0.3	0.3	0.4	0.8	0.4	-0.4
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.4	0.5	0.6	0.5	0.3	0.3	0.3	0.0
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.3	0.7	0.5	0.6	0.3	0.2	-0.1
Parental Education:[a]																												
(Low)																												
1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.9	1.8	0.8	1.5	1.2	0.7	-0.4
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.5	0.4	0.5	0.1	0.4	0.3	-0.2
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.3	0.3	0.4	0.5	0.2	0.1	-0.1
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.7	0.6	0.4	0.3	0.4	0.4	-0.1
5.5-6.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	0.5	0.5	0.2	0.4	0.2	0.3	0.0
(High)																												
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.4	0.5	0.5	0.4	0.3	0.2	-0.1
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.5	0.4	0.2	0.5	0.4	-0.1
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.7	0.5	0.6	1.0	0.6	-0.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on three of six forms; N is one-half of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-27
Heroin without a Needle: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	—	—	—	—	0.8	1.0	0.8	0.8	0.9	0.7	0.6	-0.1	—	—	—	—	0.8	0.9	1.1	1.0	1.1	1.1	0.7	-0.4ss
Gender:																								
Male	—	—	—	—	1.0	0.9	0.9	0.9	0.8	0.5	0.6	+0.1	—	—	—	—	0.9	1.1	1.2	1.2	1.3	1.1	0.8	-0.3
Female	—	—	—	—	0.6	0.9	0.7	0.8	0.8	0.8	0.6	-0.2	—	—	—	—	0.7	0.7	1.0	0.8	1.0	1.0	0.6	-0.4s
College Plans:																								
None or under 4 yrs.	—	—	—	—	3.2	2.1	2.2	3.4	2.7	2.4	1.9	-0.5	—	—	—	—	1.7	1.8	2.1	1.8	2.5	2.7	1.7	-1.0
Complete 4 yrs.	—	—	—	—	0.5	0.7	0.7	0.6	0.6	0.5	0.5	0.0	—	—	—	—	0.6	0.7	1.0	0.9	0.8	0.8	0.5	-0.3s
Region:																								
Northeast	—	—	—	—	0.9	1.1	0.8	0.7	0.7	0.6	0.7	+0.1	—	—	—	—	0.5	0.7	1.0	1.4	1.6	1.2	0.8	-0.5
North Central	—	—	—	—	1.0	1.0	0.9	0.9	1.0	0.8	0.6	-0.2	—	—	—	—	0.5	0.8	1.2	0.7	1.0	1.2	0.8	-0.3
South	—	—	—	—	0.8	0.8	0.7	0.9	0.9	0.5	0.6	+0.1	—	—	—	—	1.1	1.1	1.2	1.0	1.0	1.3	0.7	-0.6ss
West	—	—	—	—	0.7	1.1	1.1	0.9	0.9	0.8	0.5	-0.3	—	—	—	—	0.9	0.9	1.0	0.8	0.8	0.5	0.5	0.0
Population Density:																								
Large MSA	—	—	—	—	0.9	1.0	0.6	0.5	0.8	0.7	0.5	-0.2	—	—	—	—	0.9	0.9	1.3	0.8	0.9	1.5	0.8	-0.8ss
Other MSA	—	—	—	—	0.8	1.0	0.9	1.0	0.8	0.8	0.8	0.0	—	—	—	—	0.7	1.0	1.0	1.1	1.2	1.0	0.7	-0.3
Non-MSA	—	—	—	—	0.9	0.9	1.0	1.0	1.1	0.5	0.4	0.0	—	—	—	—	0.9	0.7	1.1	1.0	1.2	0.9	0.7	-0.2
Parental Education:[a]																								
1.0-2.0 (Low)	—	—	—	—	1.9	1.5	1.3	2.4	1.7	1.1	1.3	+0.3	—	—	—	—	1.7	0.8	0.9	1.2	1.8	1.1	0.9	-0.2
2.5-3.0	—	—	—	—	0.7	0.9	1.1	0.7	1.0	1.3	0.6	-0.7s	—	—	—	—	0.6	0.7	1.0	1.0	1.1	1.1	0.9	-0.3
3.5-4.0	—	—	—	—	0.5	1.2	0.5	0.8	0.6	0.5	0.6	+0.1	—	—	—	—	0.9	1.0	1.3	1.2	0.9	1.3	0.5	-0.9sss
4.5-5.0	—	—	—	—	0.8	0.8	0.8	0.6	0.8	0.5	0.5	0.0	—	—	—	—	0.5	0.8	1.1	1.0	1.0	1.0	0.6	-0.4
5.5-6.0 (High)	—	—	—	—	0.7	0.8	1.0	1.1	1.1	0.3	0.4	+0.2	—	—	—	—	0.9	1.1	1.0	0.7	1.1	1.1	0.6	-0.5
Race (2-year average):[b]																								
White	—	—	—	—	—	1.0	1.0	0.8	0.8	0.8	0.7	-0.1	—	—	—	—	—	0.9	1.0	1.1	1.1	1.2	1.0	-0.2
Black	—	—	—	—	—	0.2	0.2	0.4	0.5	0.3	0.3	0.0	—	—	—	—	—	0.1	0.1	0.2	0.3	0.3	0.4	0.0
Hispanic	—	—	—	—	—	1.5	1.2	1.1	1.4	1.1	0.8	-0.3	—	—	—	—	—	0.8	1.1	1.4	1.3	0.9	0.8	-0.1

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of two forms in 1995; N is one-half of N indicated in Table D-58.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-28
Heroin without a Needle: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	1.0	1.2	0.8	1.0	1.6	0.8	-0.8sss
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	1.3	1.4	1.0	1.3	1.8	1.3	-0.5
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.7	0.9	0.7	0.8	1.5	0.4	-1.1sss
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	1.7	1.6	1.3	1.5	2.7	1.3	-1.4s
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	0.8	1.0	0.6	1.0	1.3	0.7	-0.6s
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	1.9	1.9	1.1	1.3	0.9	1.3	+0.4
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.5	1.0	0.6	0.7	1.6	1.1	-0.5
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	0.9	1.1	1.1	1.2	1.8	0.3	-1.5sss
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	0.7	0.6	0.3	1.0	2.0	0.9	-1.1
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.1	1.2	0.9	0.9	2.5	1.0	-1.4ss
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.2	1.1	0.9	1.2	1.2	0.8	-0.4
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.4	1.2	0.4	0.8	1.4	0.7	-0.7
Parental Education:[a]																												
(Low)																												
1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.8	1.7	0.5	2.0	2.7	1.5	-1.1
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	0.6	0.8	1.1	1.1	1.8	0.5	-1.3ss
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	1.1	1.3	0.9	0.8	1.7	0.8	-0.9s
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	1.2	1.2	0.8	1.1	1.6	1.1	-0.5
5.5-6.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	1.0	1.0	0.5	1.0	0.6	0.8	+0.2
(High)																												
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.3	1.2	1.1	1.4	1.3	-0.1
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.2	0.3	0.3	0.1	0.4	0.4	+0.1
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	0.6	0.4	0.6	1.8	1.3	-0.5

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on three of six forms; N is one-half of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-31
Amphetamines, Adjusted: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months[a]																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	16.2	15.8	16.3	17.1	18.3	20.8	26.0	20.3	17.9	17.7	15.8	13.4	12.2	10.9	10.8	9.1	8.2	7.1	8.4	9.4	9.3	9.5	10.2	10.1	10.2	10.5	10.9	+0.4
Gender:																												
Male	15.6	15.8	16.0	16.9	18.4	19.7	24.8	19.6	17.2	16.8	14.9	12.7	11.8	10.8	11.1	9.4	8.3	7.2	8.2	9.2	9.5	9.6	10.1	10.3	10.6	10.4	10.9	+0.5
Female	16.5	15.4	16.4	17.1	17.8	21.8	26.9	20.3	17.9	18.2	16.4	13.8	12.4	10.9	10.5	8.6	7.9	6.9	8.5	9.4	8.9	8.8	10.2	9.8	9.6	10.5	10.6	+0.1
College Plans:																												
None or under 4 years	—	19.3	20.5	20.0	21.8	25.8	30.9	23.7	20.9	22.2	19.7	17.7	16.0	13.9	15.1	12.6	11.0	9.7	11.0	13.4	12.3	12.8	14.1	13.6	12.7	13.9	14.4	+0.5
Complete 4 years	—	11.9	11.5	13.7	14.5	16.5	22.3	16.8	14.5	14.2	13.3	10.9	10.2	9.5	9.1	7.4	7.0	6.1	7.6	8.0	8.3	8.4	8.9	9.0	9.5	9.6	9.8	+0.2
Region:																												
Northeast	16.5	14.7	16.8	19.6	22.0	22.0	28.8	21.5	17.9	19.0	16.8	12.6	10.4	8.4	9.0	6.3	6.5	6.2	8.1	7.4	9.6	10.4	11.1	9.0	9.9	10.6	12.0	+1.5
North Central	18.7	17.8	19.0	18.2	18.3	22.2	30.1	24.1	20.4	20.3	17.3	15.2	13.5	12.2	13.3	10.7	10.1	8.4	8.9	12.0	9.5	10.0	10.8	11.0	10.5	10.4	12.7	+2.3
South	12.6	13.7	13.2	14.0	14.0	17.7	19.6	16.4	15.4	15.1	12.8	11.5	11.5	10.8	9.9	8.9	7.9	6.7	8.3	9.0	9.2	9.1	9.8	10.4	10.8	10.2	9.5	-0.8
West	18.5	17.2	16.0	17.8	20.7	22.1	26.6	18.7	18.2	16.9	17.3	15.0	13.4	11.8	11.2	10.2	7.8	6.9	8.3	8.4	8.9	8.3	9.1	9.6	8.8	10.9	9.7	-1.3
Population Density:																												
Large MSA	19.6	15.4	15.3	17.7	19.5	21.9	28.0	21.6	18.1	17.7	15.0	11.2	10.9	8.8	7.1	6.5	6.2	6.0	6.5	7.8	9.1	7.9	8.9	9.0	7.0	8.3	10.6	+2.3s
Other MSA	15.5	16.3	17.1	17.5	18.9	20.8	25.5	20.7	19.6	17.1	15.7	14.2	11.9	11.9	11.4	9.6	8.4	6.7	8.5	9.4	8.5	8.9	9.5	9.9	10.8	10.9	10.8	0.0
Non-MSA	14.8	15.4	15.9	16.0	16.6	19.9	25.1	18.8	15.6	18.5	16.6	14.1	14.0	11.3	13.3	10.6	9.5	9.0	9.8	10.9	10.8	11.9	13.0	12.2	12.4	12.4	11.4	-1.0
Parental Education:[b]																												
(Low)																												
1.0-2.0	15.7	13.4	14.5	14.9	16.0	19.1	22.3	18.7	15.7	17.1	14.5	11.9	11.9	9.8	10.4	7.6	9.5	7.0	9.0	10.4	9.9	8.1	9.8	9.7	9.9	11.0	8.9	-2.1
2.5-3.0	16.7	16.9	17.4	17.3	18.4	22.2	26.7	21.9	19.6	19.2	17.0	15.2	13.3	11.1	11.7	9.7	9.1	7.7	8.6	10.3	9.9	10.5	10.3	10.6	11.3	11.0	12.2	+1.2
3.5-4.0	14.9	16.6	16.1	18.2	19.6	21.5	26.9	21.7	19.4	18.5	17.2	14.3	12.6	11.8	12.3	10.6	8.9	7.7	9.1	9.4	9.1	9.3	10.8	11.4	10.8	10.6	11.6	+1.0
4.5-5.0	14.5	16.8	15.9	16.9	17.1	20.0	26.2	19.1	18.9	15.9	15.1	12.0	11.7	10.3	9.4	8.1	6.5	6.3	8.0	9.5	9.2	8.9	9.4	9.4	9.7	10.3	10.7	+0.4
5.5-6.0	12.0	14.6	16.0	17.2	20.4	17.9	26.8	20.5	16.1	14.0	10.9	10.1	10.4	10.0	9.1	7.3	5.7	5.8	7.6	7.1	8.1	9.1	10.2	8.7	8.4	10.2	8.7	-1.6
(High)																												
Race (2-year average)[c]																												
White	—	—	17.3	18.2	19.2	21.3	26.4	23.6	22.3	20.5	18.9	16.4	14.3	13.0	12.4	11.4	9.8	8.8	9.0	10.4	10.7	10.5	11.4	12.1	11.9	11.9	12.6	+0.7
Black	—	—	5.3	4.7	4.2	5.3	5.8	6.0	5.7	4.7	4.3	4.0	3.8	3.9	3.6	3.1	2.7	2.2	2.3	3.4	3.4	2.9	2.8	2.8	2.5	2.6	3.0	+0.5
Hispanic	—	—	12.3	12.2	12.8	14.5	17.5	12.3	11.6	13.2	14.6	10.8	8.7	9.6	9.0	7.0	6.1	6.0	6.2	6.4	7.1	7.8	7.3	7.0	7.6	9.2	9.2	0.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Beginning in 1982, the question about amphetamine use was revised to get respondents to exclude the inappropriate reporting of nonprescription amphetamines. The prevalence of use rate dropped slightly as a result of this methodological change. (In 1982 and 1983, these data were based on three of the five questionnaire forms.) Only drug use which was not under a doctor's orders is included here.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-32
Methamphetamine: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percentage who used in last twelve months																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	—	—	—	—	—	—	—	—	3.2	2.5	2.8	+0.2	—	—	—	—	—	—	—	—	4.6	4.0	3.7	-0.3
Gender:																								
Male	—	—	—	—	—	—	—	—	3.1	2.2	2.5	+0.3	—	—	—	—	—	—	—	—	4.5	4.5	3.8	-0.7
Female	—	—	—	—	—	—	—	—	3.2	2.8	3.0	+0.3	—	—	—	—	—	—	—	—	4.7	3.6	3.5	-0.1
College Plans:																								
None or under 4 yrs.	—	—	—	—	—	—	—	—	7.4	6.8	6.6	-0.1	—	—	—	—	—	—	—	—	9.1	8.8	7.0	-1.8
Complete 4 yrs.	—	—	—	—	—	—	—	—	2.7	2.0	2.3	+0.2	—	—	—	—	—	—	—	—	3.9	3.3	3.1	-0.2
Region:																								
Northeast	—	—	—	—	—	—	—	—	1.6	2.0	1.2	-0.8	—	—	—	—	—	—	—	—	5.1	4.1	2.3	-1.7
North Central	—	—	—	—	—	—	—	—	4.4	3.0	3.2	+0.2	—	—	—	—	—	—	—	—	4.6	4.0	3.8	-0.3
South	—	—	—	—	—	—	—	—	3.4	2.4	3.4	+0.9	—	—	—	—	—	—	—	—	4.0	3.8	4.0	+0.2
West	—	—	—	—	—	—	—	—	2.8	2.5	2.4	0.0	—	—	—	—	—	—	—	—	5.1	4.4	4.6	+0.2
Population Density:																								
Large MSA	—	—	—	—	—	—	—	—	2.2	2.1	1.6	-0.5	—	—	—	—	—	—	—	—	3.8	4.4	4.0	-0.5
Other MSA	—	—	—	—	—	—	—	—	3.6	2.6	3.4	+0.9	—	—	—	—	—	—	—	—	4.8	3.4	3.6	+0.2
Non-MSA	—	—	—	—	—	—	—	—	3.5	3.0	2.8	-0.2	—	—	—	—	—	—	—	—	5.2	4.8	3.6	-1.2
Parental Education:[a]																								
1.0-2.0 (Low)	—	—	—	—	—	—	—	—	6.3	5.0	4.4	-0.6	—	—	—	—	—	—	—	—	7.2	7.0	5.6	-1.4
2.5-3.0	—	—	—	—	—	—	—	—	4.3	3.1	4.0	+1.0	—	—	—	—	—	—	—	—	4.2	4.3	4.6	+0.3
3.5-4.0	—	—	—	—	—	—	—	—	3.3	2.4	3.0	+0.7	—	—	—	—	—	—	—	—	4.8	4.3	3.2	-1.1
4.5-5.0	—	—	—	—	—	—	—	—	1.9	1.3	1.6	+0.3	—	—	—	—	—	—	—	—	4.8	3.5	3.6	+0.1
5.5-6.0 (High)	—	—	—	—	—	—	—	—	3.2	2.2	1.2	-0.9	—	—	—	—	—	—	—	—	3.3	3.5	2.5	-1.0
Race (2-year average):[b]																								
White	—	—	—	—	—	—	—	—	—	3.2	3.1	-0.1	—	—	—	—	—	—	—	—	—	4.7	4.1	-0.5
Black	—	—	—	—	—	—	—	—	—	1.1	0.8	-0.4	—	—	—	—	—	—	—	—	—	0.4	1.0	+0.6
Hispanic	—	—	—	—	—	—	—	—	—	4.0	3.3	-0.7	—	—	—	—	—	—	—	—	—	3.9	3.0	-0.9

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of four forms; N is one-third of N indicated in Table D-58.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-33
Methamphetamine: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.7	4.3	3.9	-0.4
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.0	4.4	4.3	-0.1
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.5	4.2	3.4	-0.8
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.8	6.2	6.9	+0.7
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	3.8	3.2	-0.7
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.1	4.5	3.4	-1.1
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.1	4.1	4.7	+0.6
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.9	3.7	3.4	-0.4
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	7.1	5.4	4.4	-1.1
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	3.6	2.7	-0.9
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.0	4.9	4.0	-0.9
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.4	4.3	5.3	+1.0
Parental Education:[a]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	6.0	7.7	5.0	-2.7
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.8	3.5	4.8	+1.3
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	5.2	3.9	3.8	-0.1
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	3.7	4.2	3.1	-1.1
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.2	5.5	3.2	-2.3
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.9	4.6	-0.3
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.0	-0.2
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	4.9	4.6	-0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on two of six forms; N is two-sixths of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-34
Ice (Crystal Methamphetamine): Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.4	1.3	1.7	1.8	2.4	2.8	2.3	3.0	1.9	2.2	2.5	+0.3
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.9	1.5	1.9	2.2	2.6	3.9	2.6	3.9	2.2	2.5	2.7	+0.2
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.9	1.0	1.2	1.3	2.1	1.7	2.1	2.1	1.6	1.9	2.1	+0.2
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	1.9	2.2	2.6	2.4	4.3	5.1	3.8	5.0	2.3	3.8	4.2	+0.4
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	1.2	1.0	1.4	1.5	1.8	2.1	1.9	2.4	1.8	1.7	2.0	+0.4
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.1	0.9	1.1	0.9	1.4	3.2	2.8	2.6	1.0	1.0	1.9	+0.9
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.4	1.1	1.5	2.3	2.2	2.1	1.9	2.7	1.7	2.8	2.1	-0.7
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	1.0	1.0	1.2	1.2	1.8	2.0	1.6	3.1	2.3	2.0	1.7	-0.3
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.5	2.2	2.6	3.2	2.8	4.7	4.9	3.7	3.4	2.5	2.9	4.7	+1.9
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	1.3	1.5	2.2	2.0	3.0	4.6	2.9	2.5	1.6	2.3	2.7	+0.4
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.7	1.3	1.7	1.8	2.0	2.0	2.0	3.3	2.1	1.7	2.3	+0.7
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	0.8	1.2	1.2	1.6	2.3	2.6	2.1	2.8	2.0	3.0	2.5	-0.5
Parental Education:[a]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.0	0.9	1.6	1.0	3.2	3.4	2.2	2.8	3.6	3.2	5.9	+2.7
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	1.1	1.1	1.2	3.0	2.6	3.0	2.5	3.2	1.3	1.7	2.4	+0.7
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	1.2	1.5	2.3	1.6	1.9	2.6	2.2	3.6	2.5	1.9	2.8	+0.9
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	1.8	1.4	1.8	1.3	2.5	2.9	2.9	2.6	1.3	2.8	1.5	-1.3
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.0	1.4	1.3	1.0	2.2	2.5	1.4	1.9	2.1	1.3	2.0	+0.7
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.3	1.5	1.7	2.0	2.5	2.6	2.9	2.8	2.3	2.4	+0.2
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.0	0.8	0.5	0.5	0.3	0.5	1.0	0.7	0.7	1.1	+0.4
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.8	2.3	2.1	2.7	4.0	2.8	1.7	1.7	2.4	3.4	+1.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on two of six forms; N is two-sixths of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-35
Barbiturates: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months[a]

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	10.7	9.6	9.3	8.1	7.5	6.8	6.6	5.5	5.2	4.9	4.6	4.2	3.6	3.2	3.3	3.4	3.4	2.8	3.4	4.1	4.7	4.9	5.1	5.5	5.8	6.2	5.7	-0.5
Gender:																												
Male	12.3	9.9	10.2	8.4	7.6	7.3	7.2	5.9	5.9	5.5	5.2	4.7	4.0	3.4	3.5	3.8	3.4	2.9	3.4	4.3	5.1	5.2	5.3	6.3	6.3	6.9	6.3	-0.6
Female	9.9	9.2	8.4	7.7	7.0	6.0	5.8	5.0	4.2	4.0	3.9	3.8	3.2	3.0	3.0	3.0	3.2	2.6	3.3	3.8	4.2	4.4	4.8	4.8	5.3	5.4	5.1	-0.3
College Plans:																												
None or under 4 years	—	11.6	11.4	9.1	9.3	9.0	8.1	7.4	6.7	6.2	6.2	6.1	4.7	4.1	4.8	4.7	4.3	3.9	3.8	5.4	5.9	6.7	6.6	6.9	7.0	7.0	7.1	+0.1
Complete 4 years	—	7.3	6.8	6.8	5.2	4.8	5.1	3.8	3.8	3.7	3.6	3.0	3.0	2.7	2.5	2.8	2.9	2.3	3.2	3.7	4.4	4.3	4.6	5.1	5.5	6.0	5.4	-0.6
Region:																												
Northeast	11.5	10.4	9.2	9.6	9.6	6.9	6.8	5.6	4.7	5.1	5.3	5.2	4.2	2.5	3.2	2.9	2.8	2.7	3.5	4.0	4.1	5.6	5.7	5.5	4.7	5.6	5.3	-0.4
North Central	12.8	10.4	10.7	7.9	6.9	7.3	7.5	5.4	6.1	4.9	4.9	4.2	3.3	2.5	3.2	3.5	3.5	2.7	3.5	4.1	4.5	4.9	4.4	4.8	6.0	5.2	5.6	+0.4
South	9.9	9.7	9.3	7.8	7.3	7.0	5.5	6.3	5.2	5.2	4.2	4.1	3.7	4.1	3.7	4.0	3.6	3.0	3.6	4.8	5.3	5.4	5.8	6.8	6.8	7.5	6.1	-1.4
West	10.0	6.7	6.6	6.6	5.7	5.2	6.5	3.9	4.0	4.2	4.1	3.3	3.2	3.2	2.7	2.9	3.3	2.5	2.7	2.8	4.3	3.3	4.2	4.2	4.9	5.7	5.6	-0.1
Population Density:																												
Large MSA	11.1	10.2	8.1	8.1	8.3	6.6	6.9	5.3	5.2	4.4	4.4	3.7	3.3	2.8	2.6	2.6	2.4	2.4	2.6	3.6	4.1	3.6	4.2	4.6	3.7	5.1	5.9	+0.8
Other MSA	11.3	9.8	9.9	8.2	7.3	6.5	6.4	5.7	5.3	4.9	4.2	4.4	3.6	3.4	3.1	3.6	3.9	2.6	3.1	4.3	4.9	5.4	5.0	5.6	6.2	6.6	6.1	-0.5
Non-MSA	9.8	9.0	9.5	8.1	7.0	7.2	6.6	5.5	5.0	5.5	5.4	4.5	3.9	3.2	4.4	3.9	3.3	3.4	4.3	4.1	5.0	5.4	6.4	6.8	7.4	6.8	4.9	-1.9s
Parental Education:[b]																												
(Low) 1.0-2.0	10.3	9.1	8.0	7.5	7.8	8.0	6.5	5.8	6.1	4.7	5.0	4.8	3.8	4.3	4.1	3.1	3.6	3.9	3.8	4.5	4.9	4.8	4.3	6.4	7.5	5.2	6.3	+1.1
2.5-3.0	10.3	10.2	10.3	8.2	7.3	7.2	6.5	5.7	5.7	5.2	5.3	4.6	3.6	3.1	3.4	3.7	3.7	2.4	3.6	4.5	5.2	4.9	4.9	6.3	6.2	7.1	5.3	-1.8s
3.5-4.0	9.5	9.6	9.0	8.3	7.4	6.3	6.5	5.1	4.6	5.0	4.4	4.4	3.2	2.9	3.2	3.9	3.0	2.8	2.8	4.0	4.6	4.9	6.0	5.6	6.4	5.8	6.1	+0.3
4.5-5.0	10.7	10.1	9.1	7.8	6.6	5.9	6.4	5.0	4.4	4.3	4.1	3.3	3.9	3.3	2.8	3.1	3.3	2.9	3.4	4.0	4.4	5.0	5.1	5.0	5.0	6.7	5.9	-0.8
5.5-6.0 (High)	9.0	10.3	8.3	8.0	7.2	5.4	6.8	5.8	3.7	4.0	3.1	3.4	3.6	3.1	3.4	2.9	3.6	2.4	3.8	3.6	4.1	4.6	4.6	5.0	5.1	5.5	5.8	+0.2
Race (2-year average):[c]																												
White	—	—	10.2	9.3	8.2	7.5	7.2	6.5	5.8	5.5	5.1	4.7	4.2	3.7	3.5	3.7	3.8	3.5	3.6	4.3	4.9	5.4	5.9	6.5	6.7	6.9	7.0	+0.1
Black	—	—	3.3	3.2	2.6	2.5	2.4	2.0	1.7	1.6	1.6	1.6	1.7	1.5	1.1	1.1	1.2	1.1	1.0	1.5	1.6	1.1	1.0	1.4	1.4	1.3	1.5	+0.2
Hispanic	—	—	7.4	5.8	5.8	5.8	5.7	5.1	4.1	4.4	4.6	3.6	2.8	2.8	3.2	2.8	2.4	2.2	1.9	2.6	3.5	4.0	3.7	3.3	4.0	5.1	4.7	-0.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Only drug use not under a doctor's orders is included here.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-36
Tranquilizers: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percentage who used in last twelve months[a]																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[b]	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001[b]	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	1.8	2.0	2.1	2.4	2.7	3.3	2.9	2.6	2.5	2.6	3.0	+0.4	3.2	3.5	3.3	3.3	4.0	4.6	4.9	5.1	5.4	5.6	5.9	+0.3
Gender:																								
Male	1.5	1.6	1.8	1.9	2.0	2.3	2.6	2.3	2.1	2.1	2.5	+0.4	2.5	2.7	3.2	3.0	4.0	4.3	4.7	4.7	5.2	5.8	5.7	-0.1
Female	2.1	2.3	2.4	2.8	3.3	4.0	3.2	3.0	2.9	3.1	3.6	+0.6	3.8	4.3	3.2	3.6	4.0	4.9	5.2	5.4	5.4	5.5	6.2	+0.7
College Plans:																								
None or under 4 yrs.	3.9	4.9	3.6	5.1	5.9	6.4	5.8	6.4	5.8	6.8	7.1	+0.3	5.0	6.0	5.8	6.0	7.4	9.4	8.6	8.3	8.6	10.0	9.2	-0.8
Complete 4 yrs.	1.5	1.5	1.9	2.0	2.3	2.8	2.6	2.2	2.0	2.2	2.5	+0.4	2.8	3.1	2.7	2.8	3.4	3.8	4.3	4.5	4.8	4.9	5.4	+0.5
Region:																								
Northeast	1.0	1.6	1.7	2.5	2.3	2.7	2.5	2.0	2.3	2.2	1.6	-0.6	2.7	2.8	3.4	2.8	2.6	3.9	3.6	5.7	5.5	3.9	4.5	+0.6
North Central	1.4	1.9	1.3	1.7	2.6	3.5	2.4	2.6	2.6	2.2	3.1	+0.9	2.4	3.0	2.5	2.6	3.2	4.4	3.7	3.4	4.6	5.4	3.5	-1.9
South	2.6	2.5	2.4	2.6	3.0	3.7	3.3	3.2	2.8	3.2	3.6	+0.5	4.2	4.5	3.9	4.2	5.1	5.7	7.3	6.6	6.0	6.9	8.3	+1.4
West	1.8	1.6	3.0	2.7	2.4	2.9	3.0	2.3	1.9	2.5	3.2	+0.7	2.9	3.2	3.2	3.6	4.3	3.6	3.7	4.1	4.9	5.4	6.8	+1.4
Population Density:																								
Large MSA	1.8	2.1	1.7	2.5	1.8	3.2	2.1	1.9	1.8	2.5	2.2	-0.3	3.2	3.3	2.7	2.6	3.2	4.2	3.9	4.1	5.0	5.5	4.9	-0.6
Other MSA	1.7	1.8	2.5	2.6	3.2	3.4	3.2	2.6	2.4	2.7	3.6	+0.8	3.0	3.8	3.3	3.9	4.1	4.6	4.4	5.2	5.5	5.4	5.8	+0.3
Non-MSA	2.2	2.2	1.6	1.9	2.6	3.1	3.2	3.6	3.4	2.7	3.0	+0.3	3.5	3.3	3.6	3.0	4.7	5.2	7.0	6.0	5.6	6.1	7.5	+1.4
Parental Education:[c]																								
1.0-2.0 (Low)	3.6	3.8	2.5	3.2	3.9	4.9	4.3	5.5	5.0	5.6	3.5	-2.1	3.3	5.3	4.8	4.2	5.0	5.9	4.7	6.5	5.0	8.2	6.0	-2.2
2.5-3.0	1.6	2.1	2.5	2.6	2.7	3.5	3.1	2.8	3.3	3.6	3.7	+0.1	3.6	3.5	3.1	3.3	4.5	5.2	5.3	6.3	5.9	6.2	5.8	-0.4
3.5-4.0	2.0	2.2	2.1	2.6	3.2	3.9	3.2	2.7	2.1	2.6	4.2	+1.6s	3.2	3.4	3.5	3.4	4.3	5.0	5.5	4.9	5.2	5.6	7.9	+2.2s
4.5-5.0	1.4	0.9	1.8	2.0	2.2	2.8	2.4	2.4	1.7	1.4	2.3	+0.9	2.5	3.9	2.9	2.9	3.5	4.1	4.2	4.5	5.7	5.2	5.4	+0.2
5.5-6.0 (High)	1.8	1.9	1.7	2.1	1.6	2.7	2.7	2.1	1.9	2.2	1.4	-0.8	3.5	2.3	3.1	3.4	3.2	3.6	4.4	4.0	5.3	4.7	3.1	-1.6
Race (2-year average):[d]																								
White	—	2.0	2.0	2.2	2.7	3.2	3.4	3.1	2.9	3.0	3.0	0.0	—	4.0	3.8	3.6	4.1	4.9	5.6	6.0	6.1	6.4	7.0	+0.7
Black	—	0.9	1.1	1.2	1.2	1.3	1.2	0.9	0.7	0.5	0.5	+0.1	—	0.9	0.9	0.9	0.8	0.7	0.9	1.0	1.2	1.1	1.5	+0.4
Hispanic	—	2.7	3.1	3.4	3.3	3.5	3.5	3.4	3.5	3.5	3.6	+0.1	—	2.9	3.3	3.1	3.1	3.4	3.5	3.5	3.7	4.0	4.0	0.0

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Only drug use not under a doctor's orders is included here.

[b] In 2001, for the tranquilizer list of examples, Miltown was replaced with Xanax. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" are also affected by this change.

[c] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[d] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-37
Tranquilizers: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last twelve months[a]

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001[b]	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	10.6	10.3	10.8	9.9	9.6	8.7	8.0	7.0	6.9	6.1	6.1	5.8	5.5	4.8	3.8	3.5	3.6	2.8	3.5	3.7	4.4	4.6	4.7	5.5	5.8	5.7	6.5	+0.8
Gender:																												
Male	10.0	9.4	10.2	9.7	9.9	9.0	8.0	6.9	7.0	6.3	6.4	5.9	5.2	4.7	4.0	3.5	3.5	2.7	3.5	4.0	4.7	5.0	5.4	6.3	6.9	6.4	6.9	+0.5
Female	11.1	11.0	11.4	10.1	9.3	8.5	7.7	7.1	6.7	5.8	5.7	5.8	5.8	4.8	3.5	3.5	3.6	3.0	3.3	3.5	4.1	4.0	3.9	4.7	4.8	4.9	5.9	+1.0
College Plans:																												
None or under 4 years	—	11.5	12.3	11.1	11.0	10.7	9.4	8.0	8.0	7.4	6.8	7.2	6.7	5.1	4.8	4.3	4.2	3.9	3.9	4.5	5.6	5.6	6.2	6.8	6.4	6.7	8.4	+1.7
Complete 4 years	—	8.9	9.0	8.6	8.1	7.2	6.9	6.3	5.8	5.2	5.5	5.1	4.9	4.6	3.3	3.2	3.4	2.5	3.3	3.5	4.1	4.2	4.0	5.1	5.6	5.2	5.8	+0.6
Region:																												
Northeast	9.2	9.7	10.4	10.9	11.5	8.6	8.3	7.8	6.8	6.8	7.1	6.4	6.9	4.5	3.7	2.9	3.0	3.0	3.7	3.5	3.9	4.8	5.3	4.9	5.6	5.2	7.1	+1.9
North Central	10.6	10.1	11.0	8.8	7.5	8.2	7.8	6.2	6.8	5.6	6.0	5.5	4.5	3.7	3.1	2.9	3.0	2.3	2.8	3.1	4.0	4.4	3.5	3.7	5.1	4.7	6.2	+1.5
South	11.3	11.7	11.4	10.5	10.4	9.5	7.8	7.4	7.4	6.9	5.9	6.3	5.7	6.0	4.4	4.3	4.0	3.5	4.2	4.8	5.0	5.3	5.4	7.5	7.6	6.7	5.6	-1.1
West	11.7	8.5	9.6	8.9	9.4	8.6	8.0	6.4	6.2	4.9	5.3	4.8	5.2	4.4	3.4	3.9	4.4	2.3	3.0	2.8	4.3	3.0	4.3	4.4	3.9	5.6	7.9	+2.3
Population Density:																												
Large MSA	11.2	9.6	9.6	10.3	9.9	8.7	8.3	7.0	7.0	5.4	5.8	5.3	5.8	4.7	3.1	3.6	2.5	2.9	2.9	3.9	4.0	3.7	4.2	4.8	4.0	4.7	7.9	+3.2ss
Other MSA	11.0	11.3	11.4	10.1	10.2	9.3	8.1	7.2	7.2	6.1	6.0	5.7	5.6	5.0	3.5	3.7	4.1	2.7	3.6	3.7	4.5	4.9	4.8	5.7	6.6	6.2	6.2	0.0
Non-MSA	9.9	9.5	11.0	9.2	8.7	8.0	7.5	6.8	6.5	6.8	6.5	6.4	5.2	4.5	4.9	3.3	3.7	3.1	3.7	3.5	4.8	4.7	5.1	5.9	6.5	6.0	5.5	-0.5
Parental Education:[c]																												
(Low) 1.0-2.0	11.2	10.1	9.4	9.4	9.1	7.8	7.1	6.1	6.0	6.5	5.3	6.7	5.7	3.9	3.6	3.4	4.0	3.9	3.3	4.2	3.9	4.2	3.9	6.4	5.2	6.4	4.5	-1.9
2.5-3.0	9.8	10.3	11.5	10.1	8.8	9.1	8.0	7.3	7.2	6.5	6.2	5.8	5.4	4.6	3.9	3.2	3.6	2.8	3.3	3.5	4.7	4.0	4.3	5.2	6.2	5.3	7.3	+1.9
3.5-4.0	9.8	11.2	11.1	9.5	10.4	8.9	8.3	6.7	6.9	5.8	6.4	6.5	5.3	4.5	3.4	4.4	3.1	2.7	3.5	3.6	4.3	4.7	4.6	6.0	6.4	5.6	6.5	+0.9
4.5-5.0	11.3	11.7	11.4	10.5	10.0	8.1	7.4	7.6	6.6	5.8	6.3	4.7	5.9	5.5	3.8	3.1	3.9	3.0	3.4	3.7	4.5	4.6	5.4	4.9	5.4	5.9	7.0	+1.2
5.5-6.0 (High)	9.3	12.0	10.1	11.0	11.4	10.3	9.1	7.6	7.1	6.3	5.5	5.4	5.4	5.6	4.9	4.0	4.0	2.2	4.2	4.2	4.1	5.3	5.1	5.5	5.6	5.8	4.6	-1.2
Race (2-year average):[d]																												
White	—	—	11.4	11.1	10.5	9.9	9.1	8.3	7.8	7.3	6.8	6.6	6.3	5.9	5.0	4.2	4.1	3.7	3.7	4.2	4.6	5.1	5.5	6.2	6.8	6.9	7.7	+0.8
Black	—	—	4.3	4.2	3.6	3.1	3.0	2.5	2.3	2.1	1.7	1.7	2.0	2.0	1.2	0.7	0.9	1.3	1.0	1.1	1.2	0.9	0.8	1.0	1.0	0.7	0.6	-0.2
Hispanic	—	—	8.4	8.2	7.4	6.4	5.7	5.8	5.1	5.3	5.0	4.4	3.7	2.5	1.6	1.9	2.7	2.4	2.0	2.4	3.5	4.3	3.8	3.3	3.5	4.3	3.9	-0.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Only drug use not under a doctor's orders is included here.

[b] In 2001, for the tranquilizer list of examples, Miltown was replaced with Xanax. The 2000 data presented here are based on all forms. The 2001 estimates are based on the unchanged forms only; N is one-half of N indicated. The change score given is the difference between the unchanged forms only in both 2000 and 2001. Data for "any illicit drugs other than marijuana" are also affected by this change.

[c] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[d] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-38
Rohypnol: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percentage who used in last twelve months																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	—	—	—	—	—	1.0	0.8	0.8	0.5	0.5	0.7	+0.2	—	—	—	—	—	1.1	1.3	1.2	1.0	0.8	1.0	+0.2
Gender:																								
Male	—	—	—	—	—	1.1	0.7	0.8	0.6	0.5	0.6	+0.1	—	—	—	—	—	1.1	1.4	1.4	1.2	1.0	1.1	+0.2
Female	—	—	—	—	—	1.0	0.9	0.9	0.2	0.6	0.7	+0.1	—	—	—	—	—	1.1	1.1	1.1	0.9	0.6	0.9	+0.3
College Plans:																								
None or under 4 yrs.	—	—	—	—	—	2.5	1.5	3.0	0.9	2.2	2.0	-0.2	—	—	—	—	—	2.9	2.7	2.9	2.8	1.4	2.8	+1.4
Complete 4 yrs.	—	—	—	—	—	0.8	0.7	0.6	0.4	0.4	0.5	+0.2	—	—	—	—	—	0.8	1.1	0.9	0.8	0.6	0.7	+0.1
Region:																								
Northeast	—	—	—	—	—	0.9	0.3	0.9	0.3	0.6	0.9	+0.3	—	—	—	—	—	0.6	0.7	0.9	0.4	0.6	0.9	+0.3
North Central	—	—	—	—	—	0.9	0.8	0.8	0.3	0.4	1.0	+0.5	—	—	—	—	—	0.5	0.8	1.0	0.9	0.4	0.9	+0.5
South	—	—	—	—	—	1.3	1.1	0.9	0.7	0.9	0.6	-0.3	—	—	—	—	—	1.9	2.4	2.0	1.8	1.2	1.0	-0.2
West	—	—	—	—	—	1.0	0.7	0.8	0.5	*	0.4	+0.4	—	—	—	—	—	1.1	0.6	0.5	0.6	0.7	1.3	+0.6
Population Density:																								
Large MSA	—	—	—	—	—	1.2	0.8	0.7	0.4	0.9	1.2	+0.3	—	—	—	—	—	1.1	1.3	1.3	0.9	0.9	1.2	+0.3
Other MSA	—	—	—	—	—	1.1	0.9	1.0	0.6	0.5	0.5	0.0	—	—	—	—	—	1.4	1.3	1.3	1.3	0.9	0.8	-0.1
Non-MSA	—	—	—	—	—	0.8	0.7	0.8	0.3	0.2	0.4	+0.2	—	—	—	—	—	0.6	1.3	1.0	0.7	0.5	1.2	+0.7
Parental Education:[a]																								
1.0-2.0 (Low)	—	—	—	—	—	2.0	2.1	2.2	0.2	0.9	1.3	+0.4	—	—	—	—	—	1.7	1.3	1.7	1.2	1.3	2.3	+1.0
2.5-3.0	—	—	—	—	—	1.1	1.1	0.8	0.3	0.8	0.3	-0.5	—	—	—	—	—	1.0	1.1	1.6	1.6	0.5	1.1	+0.6
3.5-4.0	—	—	—	—	—	1.2	0.7	0.9	0.6	0.2	1.2	+1.1ss	—	—	—	—	—	1.5	1.6	1.0	0.8	0.8	0.7	-0.1
4.5-5.0	—	—	—	—	—	0.8	0.6	0.6	0.5	0.4	0.7	+0.3	—	—	—	—	—	0.7	1.5	0.9	0.6	0.7	1.1	+0.5
5.5-6.0 (High)	—	—	—	—	—	0.8	0.5	0.9	0.7	0.9	0.2	-0.7	—	—	—	—	—	1.1	0.8	1.3	1.1	0.8	0.3	-0.5
Race (2-year average):[b]																								
White	—	—	—	—	—	—	0.9	0.8	0.7	0.5	0.6	0.0	—	—	—	—	—	—	1.4	1.5	1.5	1.0	1.0	0.0
Black	—	—	—	—	—	—	0.4	0.4	0.4	0.3	0.4	+0.2	—	—	—	—	—	—	0.1	0.1	0.1	0.1	0.2	+0.1
Hispanic	—	—	—	—	—	—	1.4	1.5	1.5	0.6	0.9	+0.3	—	—	—	—	—	—	1.0	1.2	1.1	0.7	0.9	+0.2

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
'*' indicates less than .05 percent but greater than 0 percent.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases. See Appendix B for definition of variables in table.
Data based on one of two forms in 1996–97; N is one-half of N indicated in Table D-58. Data based on three of four forms in 1998; N is two-thirds of N indicated in Table D-58. Data based on two of four forms beginning in 1999; N is one-third of N indicated in Table D-58.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-39
Rohypnol: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last twelve months																										
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	1.2	1.4	1.0	0.8	0.9	+0.2
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.2	1.7	1.0	0.8	1.1	+0.3
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.3	1.1	1.1	1.0	0.7	0.6	-0.1
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.4	0.5	1.8	1.0	0.1	1.2	+1.0
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.3	1.3	1.0	0.9	0.8	-0.1
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	0.6	1.2	0.8	0.3	1.7	+1.4
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.0	0.5	1.0	0.8	0.9	0.5	-0.4
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	2.2	2.6	1.6	1.3	1.0	-0.4
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.8	0.0	0.2	0.1	0.8	+0.7
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	0.9	0.8	0.3	0.3	1.0	+0.7
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.5	2.2	1.4	1.1	1.2	+0.1
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.7	0.7	0.6	0.9	0.7	0.3	-0.3
Parental Education:[a]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	0.4	0.6	4.7	0.0	4.2	+4.2s
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.5	0.6	1.0	0.3	0.4	0.4	0.0
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.8	1.4	1.1	1.1	1.5	0.8	-0.7
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	1.7	2.7	0.3	0.6	0.8	+0.1
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.7	1.4	0.7	0.0	0.2	+0.2
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	1.6	1.5	0.9	0.8	-0.1
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.1	0.0	0.2	0.4	0.2	-0.3
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	1.3	1.0	0.6	1.3	+0.6

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of six forms; N is one-sixth of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

CAUTION: Limited sample sizes (see "Notes" above). Use caution in interpreting subgroup trends.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-40
Alcohol: Trends in Thirty-Day Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last thirty days

8th Grade

	1991	1992	1993[a]	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*1750*	*1860*	*1830*	*1730*	*1750*	*1780*	*1860*	*1810*	*16700*	*1670*	*1620*	
Total	25.1	26.1	26.2	—	—	—	—	—	—	—	—	—
			24.3	25.5	24.6	26.2	24.5	23.0	24.0	22.4	21.5	-0.9
Gender:												
Male	26.3	26.3	26.7	—	—	—	—	—	—	—	—	—
			25.3	26.5	25.0	26.6	25.2	24.0	24.8	22.5	22.3	-0.2
Female	23.8	25.9	26.1	—	—	—	—	—	—	—	—	—
			23.7	24.7	24.0	25.8	23.9	21.9	23.3	22.0	20.6	-1.4
College Plans:												
None or under 4 yrs.	37.2	39.6	39.2	—	—	—	—	—	—	—	—	—
			41.1	41.4	40.0	41.7	40.2	41.2	41.6	38.3	37.0	-1.3
Complete 4 yrs.	23.1	24.2	24.8	—	—	—	—	—	—	—	—	—
			22.2	23.6	22.6	24.0	22.8	21.0	22.0	20.4	19.7	-0.7
Region:												
Northeast	24.3	23.8	24.8	—	—	—	—	—	—	—	—	—
			21.0	25.4	24.1	26.9	24.8	21.2	25.7	25.6	23.3	-2.3
North Central	26.6	28.3	25.8	—	—	—	—	—	—	—	—	—
			24.7	24.2	24.7	26.9	22.8	23.9	25.7	24.1	21.2	-2.9
South	25.1	26.8	26.4	—	—	—	—	—	—	—	—	—
			25.4	25.6	25.5	26.3	26.4	23.8	24.4	20.9	22.8	+1.9
West	23.1	23.5	27.9	—	—	—	—	—	—	—	—	—
			25.6	27.2	23.1	24.8	22.7	22.2	19.8	20.2	18.1	-2.1
Population Density:												
Large MSA	25.4	27.4	24.7	—	—	—	—	—	—	—	—	—
			21.2	23.8	22.3	24.9	23.1	21.4	21.7	21.2	19.4	-1.8
Other MSA	24.3	26.1	27.6	—	—	—	—	—	—	—	—	—
			26.0	27.4	25.3	27.4	24.9	22.4	23.4	21.3	21.5	+0.2
Non-MSA	26.2	24.2	25.1	—	—	—	—	—	—	—	—	—
			24.9	23.8	26.0	25.7	25.4	26.0	28.1	26.1	24.1	-2.0
Parental Education:[b]												
1.0-2.0 (Low)	30.7	32.8	32.5	—	—	—	—	—	—	—	—	—
			28.0	33.5	30.8	28.1	29.7	28.9	30.7	30.2	28.5	-1.7
2.5-3.0	27.0	27.2	28.0	—	—	—	—	—	—	—	—	—
			28.0	27.4	27.8	30.1	26.2	26.5	27.9	26.3	27.0	+0.7
3.5-4.0	25.1	26.3	28.2	—	—	—	—	—	—	—	—	—
			25.9	26.7	28.8	27.6	27.8	24.5	25.2	23.0	23.3	+0.3
4.5-5.0	22.8	24.6	23.1	—	—	—	—	—	—	—	—	—
			20.6	22.6	21.0	25.0	22.6	20.2	20.4	18.4	17.2	-1.2
5.5-6.0 (High)	24.0	25.2	26.2	—	—	—	—	—	—	—	—	—
			22.3	23.6	20.5	21.5	20.5	21.3	22.1	19.0	16.4	-2.5
Race (2-year average):[c]												
White	—	26.6	27.1	—	—	—	—	—	—	—	—	—
			—	25.3	25.4	26.6	26.7	24.8	24.7	24.7	23.2	-1.5
Black	—	18.6	19.7	—	—	—	—	—	—	—	—	—
			—	19.4	18.7	18.1	17.9	16.1	16.1	16.0	15.0	-0.9
Hispanic	—	31.0	32.3	—	—	—	—	—	—	—	—	—
			—	33.5	32.4	29.7	29.8	29.5	29.0	26.7	25.7	-1.1

10th Grade

	1991	1992	1993[a]	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*1480*	*1480*	*1530*	*1580*	*1700*	*1560*	*1550*	*1500*	*1360*	*1430*	*1400*	
Total	42.8	39.9	41.5	—	—	—	—	—	—	—	—	—
			38.2	39.2	38.8	40.4	40.1	38.8	40.0	41.0	39.0	-2.0
Gender:												
Male	45.5	41.6	43.4	—	—	—	—	—	—	—	—	—
			40.6	43.5	39.7	42.6	42.5	40.0	42.3	43.3	41.1	-2.2
Female	40.2	38.3	39.4	—	—	—	—	—	—	—	—	—
			35.6	34.8	37.8	38.3	37.9	37.7	38.1	38.6	36.8	-1.8
College Plans:												
None or under 4 yrs.	53.6	49.5	53.5	—	—	—	—	—	—	—	—	—
			48.6	52.0	52.2	53.3	51.6	52.4	53.7	53.9	52.2	-1.7
Complete 4 yrs.	40.6	37.9	39.1	—	—	—	—	—	—	—	—	—
			36.1	36.4	36.4	38.3	38.1	36.5	37.9	39.1	36.8	-2.3s
Region:												
Northeast	48.0	42.3	43.5	—	—	—	—	—	—	—	—	—
			42.4	37.4	38.3	41.4	41.1	41.6	44.8	42.0	37.8	-4.2
North Central	43.5	40.3	42.5	—	—	—	—	—	—	—	—	—
			37.4	39.6	38.9	39.1	38.6	37.6	40.9	42.5	41.0	-1.6
South	41.7	38.2	40.4	—	—	—	—	—	—	—	—	—
			38.0	40.5	39.4	41.7	40.8	39.9	38.8	39.1	38.3	-0.8
West	39.6	39.8	39.7	—	—	—	—	—	—	—	—	—
			35.6	38.2	38.0	38.9	39.9	35.5	36.1	41.1	38.2	-2.9
Population Density:												
Large MSA	43.6	40.4	40.9	—	—	—	—	—	—	—	—	—
			39.0	36.3	34.6	37.9	37.8	34.2	39.7	42.4	37.6	-4.8s
Other MSA	41.4	38.6	38.8	—	—	—	—	—	—	—	—	—
			36.2	40.1	[illegible]	41.0	40.2	39.0	39.7	39.3	38.3	-1.0
Non-MSA	44.8	41.9	47.0	—	—	—	—	—	—	—	—	—
			41.3	40.6	41.3	42.1	42.6	43.7	41.0	42.4	41.8	-0.5
Parental Education:[b]												
1.0-2.0 (Low)	42.1	40.4	41.3	—	—	—	—	—	—	—	—	—
			37.5	38.6	43.5	43.2	39.2	39.9	40.6	41.1	38.6	-2.5
2.5-3.0	43.9	40.9	44.9	—	—	—	—	—	—	—	—	—
			40.6	41.5	42.3	42.6	41.1	41.2	42.3	42.8	41.4	-1.3
3.5-4.0	44.2	40.0	41.8	—	—	—	—	—	—	—	—	—
			38.0	40.6	38.8	42.2	41.6	40.1	40.2	42.8	41.0	-1.9
4.5-5.0	40.7	39.4	38.3	—	—	—	—	—	—	—	—	—
			36.2	37.7	37.9	37.8	39.3	36.9	38.7	40.2	37.0	-3.1
5.5-6.0 (High)	44.9	41.7	39.9	—	—	—	—	—	—	—	—	—
			39.3	35.4	34.3	39.6	38.9	37.0	40.9	39.0	37.1	-1.9
Race (2-year average):[c]												
White	—	44.1	43.1	—	—	—	—	—	—	—	—	—
			—	40.4	41.0	42.2	43.0	42.7	43.0	43.9	42.7	-1.2
Black	—	30.2	29.3	—	—	—	—	—	—	—	—	—
			—	29.7	28.0	23.9	24.8	25.1	24.4	24.7	25.3	+0.6
Hispanic	—	41.0	39.9	—	—	—	—	—	—	—	—	—
			—	37.7	40.5	44.0	42.8	39.4	39.6	40.5	40.2	-0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 1993, the question text was changed slightly in one form to indicate that a "drink" meant "more than a few sips." The data in the upper line for each subgroup came from the form using the original wording, while the data in the lower line came from the form using the revised wording. N is one-half of N indicated for each line. Beginning in 1994, data based on both forms.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-41
Alcohol: Trends in Thirty-Day Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last thirty days

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993[a]	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*15400*	*17100*	*17800*	*15500*	*15900*	*17500*	*17700*	*16300*	*15900*	*16000*	*15200*	*16300*	*16300*	*16700*	*15200*	*15000*	*15800*	*16300*	*15400*	*15400*	*14300*	*15400*	*15200*	*13600*	*12800*	*12800*	
Total	68.2	68.3	71.2	72.1	71.8	72.0	70.7	69.7	69.4	67.2	65.9	65.3	66.4	63.9	60.0	57.1	54.0	51.3	51.0	—	—	—	—	—	—	—	—	—
																			48.6	50.1	51.3	50.8	52.7	52.0	51.0	50.0	49.8	-0.3
Gender:																												
Male	75.0	74.5	77.8	77.5	76.7	77.4	75.7	74.1	74.4	71.4	69.8	69.0	69.9	68.0	65.1	61.3	58.4	55.8	54.9	—	—	—	—	—	—	—	—	—
																			54.2	55.5	55.7	54.8	56.2	57.3	55.3	54.0	54.7	+0.6
Female	62.2	61.8	65.0	67.1	67.0	66.8	65.7	65.4	64.3	62.8	62.1	61.9	63.1	59.9	54.9	52.3	49.0	46.8	46.7	—	—	—	—	—	—	—	—	—
																			43.4	45.2	47.0	46.9	48.9	46.9	46.8	46.1	45.1	-1.0
College Plans:																												
None or under 4 years	—	69.9	72.8	72.7	72.2	73.5	72.1	71.6	70.5	69.0	67.9	66.6	68.6	65.0	61.6	58.7	57.1	54.9	53.6	—	—	—	—	—	—	—	—	—
																			52.4	53.6	55.9	54.8	56.1	56.0	55.2	54.3	55.5	+1.2
Complete 4 years	—	66.5	69.4	71.6	71.4	70.8	70.0	68.6	68.1	65.7	64.6	64.8	65.7	63.6	59.1	56.4	52.7	50.0	49.6	—	—	—	—	—	—	—	—	—
																			47.4	48.9	49.6	49.3	51.4	50.9	49.8	48.3	47.9	-0.4
Region:																												
Northeast	76.9	75.7	76.6	78.0	81.1	79.4	80.4	76.7	74.4	73.6	72.3	67.6	69.1	66.7	61.7	65.3	59.6	51.5	55.2	—	—	—	—	—	—	—	—	—
																			56.1	53.1	55.0	56.5	56.7	56.2	57.2	58.0	54.3	-3.7
North Central	71.1	73.2	76.4	77.2	73.9	75.1	73.6	75.0	74.4	70.6	66.8	71.3	70.7	67.9	65.9	61.5	59.7	58.0	54.6	—	—	—	—	—	—	—	—	—
																			51.6	53.8	55.3	51.5	51.5	51.9	51.1	52.3	54.5	+2.2
South	62.8	60.2	64.7	67.0	65.7	65.5	62.9	61.3	64.3	62.1	60.0	58.2	60.7	58.6	55.1	51.0	49.1	48.1	50.1	—	—	—	—	—	—	—	—	—
																			47.7	49.2	50.6	51.1	51.1	51.4	49.5	44.9	45.9	+1.0
West	60.0	62.2	64.4	63.1	65.5	67.6	65.3	63.8	62.9	63.6	66.2	64.5	66.7	65.0	59.3	51.6	49.7	46.7	43.8	—	—	—	—	—	—	—	—	—
																			39.8	44.2	43.2	42.1	52.7	49.2	47.8	48.3	44.9	-3.4
Population Density:																												
Large MSA	75.3	72.6	74.0	75.5	77.3	78.0	75.5	72.9	69.2	66.6	67.4	66.2	66.3	63.8	56.9	59.2	52.9	49.0	52.3	—	—	—	—	—	—	—	—	—
																			50.6	49.5	50.6	51.6	51.1	49.1	48.9	51.2	49.7	-1.5
Other MSA	68.5	67.0	72.0	72.7	72.0	70.8	69.1	69.3	69.8	66.2	65.1	64.8	66.9	64.1	60.7	57.4	55.7	50.8	49.8	—	—	—	—	—	—	—	—	—
																			47.1	49.2	50.6	50.1	53.4	53.9	52.8	48.8	49.6	+0.9
Non-MSA	63.2	66.5	67.8	68.4	67.3	69.0	68.9	67.6	69.0	69.0	65.9	65.2	65.5	63.8	61.7	54.4	52.0	54.1	51.9	—	—	—	—	—	—	—	—	—
																			49.8	52.5	53.4	51.4	52.9	51.6	50.1	50.8	50.0	-0.8
Parental Education:[b]																												
(Low) 1.0-2.0	58.7	62.5	62.0	62.7	64.6	65.9	62.1	61.3	61.2	58.1	58.7	56.1	56.3	54.5	47.8	47.2	49.9	45.6	43.3	—	—	—	—	—	—	—	—	—
																			36.6	43.5	45.9	41.2	43.8	43.8	46.8	43.4	42.9	-0.5
2.5-3.0	70.0	71.4	72.5	71.9	71.1	72.0	70.7	69.4	69.2	67.4	65.9	65.3	67.0	64.6	59.7	57.2	53.3	52.3	50.5	—	—	—	—	—	—	—	—	—
																			49.0	49.9	52.0	48.2	51.0	50.1	50.5	50.0	49.0	-1.0
3.5-4.0	69.2	67.9	73.5	75.0	74.6	73.3	71.5	72.7	70.4	69.6	66.9	66.7	67.2	64.3	62.9	57.7	54.3	51.2	53.5	—	—	—	—	—	—	—	—	—
																			51.2	50.1	50.6	51.4	52.1	55.6	51.1	51.3	51.4	0.0
4.5-5.0	69.6	71.3	74.5	77.0	76.0	74.4	73.1	74.5	73.1	69.3	68.9	68.0	68.8	66.0	62.1	60.8	54.8	51.0	50.7	—	—	—	—	—	—	—	—	—
																			49.8	52.6	51.8	53.6	55.3	52.4	50.2	48.1	51.5	+3.3
5.5-6.0 (High)	67.3	72.5	77.1	79.2	75.9	77.2	77.4	74.1	75.0	70.3	67.9	69.9	70.5	67.3	62.2	60.8	58.0	55.7	53.3	—	—	—	—	—	—	—	—	—
																			53.2	52.2	55.1	54.2	57.4	54.7	56.0	54.0	49.5	-4.5
Race (2-year average):[c]																												
White	—	—	72.8	75.0	75.3	75.4	75.4	74.6	73.9	72.8	71.2	70.2	71.0	70.6	67.3	63.8	60.0	56.8	55.6	—	—	—	—	—	—	—	—	—
																			—	54.0	54.5	54.8	56.4	57.7	56.3	55.1	55.3	+0.2
Black	—	—	49.5	48.7	47.2	47.6	46.7	46.0	47.7	45.5	42.8	42.1	39.4	39.8	39.5	35.8	33.7	31.7	32.4	—	—	—	—	—	—	—	—	—
																			—	33.8	35.2	36.5	34.3	33.3	32.2	30.0	29.4	-0.6
Hispanic	—	—	63.0	64.5	63.8	63.6	62.0	60.3	59.1	59.7	58.1	56.3	57.2	57.8	52.9	49.1	51.5	53.8	50.5	—	—	—	—	—	—	—	—	—
																			—	45.9	48.7	47.5	48.2	49.8	50.2	51.2	48.9	-2.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 1993, the question text was changed slightly in three of six forms to indicate that a "drink" meant "more than a few sips." The data in the upper line for each subgroup came from forms using the original wording, while the data in the lower line came from forms using the revised wording. Beginning in 1994, data based on all six forms.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-42
Been Drunk: Trends in Thirty-Day Prevalence by Subgroups for Eighth and Tenth Graders

Percentage who had been drunk in last thirty days

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	7.6	7.5	7.8	8.7	8.3	9.6	8.2	8.4	9.4	8.3	7.7	-0.7	20.5	18.1	19.8	20.3	20.8	21.3	22.4	21.1	22.5	23.5	21.9	-1.6
Gender:																								
Male	8.4	7.4	7.8	9.0	8.2	9.7	8.4	8.5	10.2	8.2	7.8	-0.4	22.3	18.6	21.4	23.2	21.9	23.0	24.6	22.3	25.4	26.2	24.2	-2.0
Female	7.0	7.6	7.8	8.3	8.2	9.5	7.9	8.2	8.6	8.1	7.4	-0.7	18.7	17.5	18.1	17.2	19.6	19.8	20.2	19.9	19.8	20.9	19.7	-1.3
College Plans:																								
None or under 4 yrs.	15.8	17.2	18.4	20.0	17.2	19.3	18.7	21.4	22.4	18.9	18.9	0.0	29.5	26.3	29.0	31.1	31.4	32.0	35.5	33.5	34.6	35.1	34.8	-0.3
Complete 4 yrs.	6.4	6.1	6.4	7.3	7.3	8.2	7.1	6.9	8.0	7.0	6.5	-0.5	18.6	16.4	17.9	18.0	19.0	19.7	20.3	19.1	20.7	21.8	19.8	-2.0s
Region:																								
Northeast	5.7	6.4	6.2	8.2	8.2	9.7	7.9	6.9	9.4	8.3	8.0	-0.3	23.9	18.8	20.0	19.0	19.5	22.4	21.9	23.1	25.8	22.8	19.9	-2.9
North Central	7.7	7.6	7.3	8.3	8.3	10.2	8.2	10.4	11.6	9.7	8.2	-1.6	21.8	18.9	20.1	21.0	22.6	22.0	23.3	21.8	26.0	27.6	24.0	-3.6
South	8.8	8.2	8.3	8.8	8.4	9.1	8.3	7.8	9.5	7.4	8.1	+0.7	19.2	16.8	19.8	20.9	20.9	21.4	22.0	21.9	20.3	21.4	21.5	+0.1
West	7.3	6.9	9.4	9.6	8.2	9.8	8.3	8.3	6.6	8.1	6.0	-2.1	18.2	18.3	19.0	19.5	19.5	19.3	22.6	17.0	19.0	22.4	21.2	-1.2
Population Density:																								
Large MSA	7.4	7.0	6.0	7.6	7.2	8.9	6.7	6.9	7.8	7.1	6.3	-0.8	20.6	17.6	17.6	16.1	18.2	19.6	20.7	17.2	21.6	23.4	19.5	-4.0s
Other MSA	7.3	7.4	8.4	9.7	8.9	9.9	8.6	7.5	8.4	7.2	7.9	+0.7	20.1	17.3	18.2	21.7	21.8	21.9	21.8	21.2	22.7	22.5	21.6	-1.0
Non-MSA	8.4	8.2	8.8	7.9	8.6	10.0	9.2	11.7	13.3	12.0	8.9	-3.1s	21.1	19.9	24.7	21.8	21.8	22.4	25.5	25.4	23.4	25.1	25.3	-0.1
Parental Education:[a]																								
1.0-2.0 (Low)	13.4	11.0	10.4	12.5	13.1	11.1	11.5	13.1	14.5	14.0	12.1	-1.9	20.9	18.2	22.2	20.0	23.4	22.1	19.7	20.1	21.8	21.3	22.0	+0.8
2.5-3.0	9.2	8.8	9.2	9.3	9.6	11.9	9.3	9.5	11.7	10.5	9.7	-0.9	22.5	18.5	21.4	21.2	22.9	23.4	22.5	23.3	23.4	24.5	22.6	-1.9
3.5-4.0	6.9	7.6	8.5	9.3	9.4	10.4	10.2	9.1	9.9	8.0	8.7	+0.7	20.4	19.4	19.4	22.1	21.4	22.1	24.1	21.3	23.3	24.5	22.8	-1.7
4.5-5.0	6.1	6.5	5.9	7.5	6.4	8.7	6.7	7.0	6.9	5.6	5.7	+0.1	19.7	17.1	18.2	18.7	19.7	19.5	22.3	20.2	21.7	24.1	21.4	-2.8
5.5-6.0 (High)	6.8	4.9	6.7	7.6	6.0	7.1	5.8	6.9	8.7	7.1	4.6	-2.5s	20.6	18.5	18.6	17.9	17.9	22.3	22.4	20.4	24.0	23.1	21.5	-1.6
Race (2-year average):[b]																								
White	—	7.7	7.8	8.4	8.9	9.7	9.7	9.1	9.8	10.0	9.0	-1.0	—	21.6	20.8	22.0	22.7	23.7	25.0	25.5	25.7	26.7	25.8	-0.9
Black	—	5.4	5.1	5.6	5.6	5.5	4.6	3.9	4.9	4.7	4.0	-0.7	—	9.4	10.3	10.1	9.8	8.5	8.6	8.8	7.6	8.6	9.5	+0.9
Hispanic	—	9.9	9.9	10.8	10.8	10.8	10.4	9.8	9.9	8.5	7.8	-0.7	—	16.2	15.9	17.0	18.6	20.1	19.5	18.0	17.8	18.0	18.7	+0.7

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-43

Been Drunk: Trends in Thirty-Day Prevalence by Subgroups for Twelfth Graders

	Percentage who had been drunk in last thirty days																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31.6	29.9	28.9	30.8	33.2	31.3	34.2	32.9	32.9	32.3	32.7	+0.4
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.1	35.2	34.5	34.5	37.8	35.4	39.2	39.0	37.9	38.4	37.0	-1.4
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	25.4	24.5	23.5	26.8	28.8	27.3	29.1	26.6	27.7	26.7	28.4	+1.7
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	32.2	31.4	32.6	32.2	37.6	31.4	38.1	33.7	36.1	35.0	36.3	+1.2
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.9	29.2	27.4	29.4	31.4	31.0	32.3	32.0	31.7	30.6	31.3	+0.7
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	36.4	30.0	35.0	35.2	35.5	37.2	35.9	35.6	37.5	39.3	33.9	-5.4
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	37.2	38.2	32.5	34.1	38.2	31.5	33.7	34.8	33.4	34.8	39.2	+4.4
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	26.5	25.2	26.4	29.1	31.2	31.0	34.5	30.1	30.8	26.5	28.8	+2.2
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	28.5	26.6	23.2	25.4	27.1	24.7	32.7	33.5	32.2	32.8	28.8	-4.0
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.4	26.1	29.4	28.7	32.0	31.5	31.5	32.2	29.2	30.5	30.6	+0.1
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	33.5	29.8	26.9	29.9	31.7	33.0	33.7	34.0	35.4	34.5	31.7	-2.8
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	29.4	33.7	32.0	34.4	36.9	28.2	38.2	31.4	32.5	30.5	36.7	+6.2
Parental Education:[a]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	20.4	20.5	23.6	25.7	25.4	18.8	23.7	24.6	20.8	28.4	22.2	-6.3
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	30.2	30.0	26.4	30.3	30.0	27.4	31.5	28.0	30.5	33.1	32.2	-0.9
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	31.0	31.3	29.2	29.9	34.4	31.1	32.7	34.1	34.0	31.2	32.0	+0.8
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34.4	29.4	32.8	33.5	36.5	35.8	37.7	36.0	32.8	31.9	36.1	+4.2
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	40.5	34.3	30.4	30.7	34.9	34.6	39.8	39.9	40.6	35.5	33.6	-1.9
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	34.7	33.6	34.0	36.4	36.6	37.7	39.3	37.8	37.0	37.7	+0.7
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	11.0	12.5	14.1	13.2	13.0	13.8	13.8	14.9	14.9	12.0	-2.8
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	27.2	24.8	23.0	24.2	26.2	26.9	25.9	27.5	29.8	25.5	-4.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on two of six forms; N is two-sixths of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-44
Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row by Subgroups for Eighth and Tenth Graders

Percentage reporting 5+ drinks in a row on one or more occasions

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	12.9	13.4	13.5	14.5	14.5	15.6	14.5	13.7	15.2	14.1	13.2	-0.9	22.9	21.1	23.0	23.6	24.0	24.8	25.1	24.3	25.6	26.2	24.9	-1.3
Gender:																								
Male	14.3	13.9	14.8	16.0	15.1	16.5	15.3	14.4	16.4	14.4	13.7	-0.6	26.4	23.7	26.5	28.5	26.3	27.2	28.6	26.7	29.7	29.8	28.6	-1.2
Female	11.4	12.8	12.3	13.0	13.9	14.5	13.5	12.7	13.9	13.6	12.4	-1.2	19.5	18.6	19.3	18.7	21.5	22.3	21.7	22.2	21.8	22.5	21.4	-1.2
College Plans:																								
None or under 4 yrs.	24.4	26.4	29.3	29.3	29.2	29.9	30.3	30.5	33.9	29.3	29.6	+0.3	33.0	31.8	35.1	36.4	37.5	38.2	39.4	38.2	39.3	39.3	40.2	+0.9
Complete 4 yrs.	11.1	11.5	11.3	12.5	12.7	13.3	12.5	11.6	13.0	12.3	11.2	-1.1	20.8	18.9	20.5	20.8	21.5	22.5	22.7	22.0	23.4	24.2	22.4	-1.8
Region:																								
Northeast	10.3	10.7	10.0	12.6	12.6	15.1	13.0	11.3	14.5	13.8	12.6	-1.3	25.1	19.9	23.2	21.3	22.1	23.8	23.4	25.6	28.1	25.4	22.7	-2.8
North Central	13.4	14.2	12.8	13.7	14.2	16.0	14.2	14.4	17.4	15.6	12.5	-3.1s	23.7	21.3	23.5	24.8	25.3	25.3	24.0	24.2	27.1	28.3	26.7	-1.7
South	14.1	14.8	15.5	14.9	15.7	15.8	15.3	14.2	15.7	13.7	15.3	+1.7	22.7	21.5	22.6	24.6	24.5	25.6	25.6	25.2	24.2	24.9	24.2	-0.6
West	12.3	12.8	15.0	16.5	14.4	15.3	14.6	13.9	12.2	13.3	11.0	-2.3	20.7	21.7	22.5	22.5	23.1	23.6	27.9	21.8	23.8	26.5	25.7	-0.8
Population Density:																								
Large MSA	12.4	12.5	10.6	12.3	12.3	14.5	13.7	12.2	13.1	12.8	11.1	-1.7	21.6	19.3	20.9	19.0	20.2	22.2	22.5	20.0	24.3	25.7	22.6	-3.1
Other MSA	12.4	14.0	14.5	15.7	14.2	15.7	14.0	13.0	14.2	12.8	13.2	+0.4	22.1	20.0	21.2	24.4	24.1	24.9	24.8	24.0	24.6	25.4	23.9	-1.5
Non-MSA	14.4	13.5	15.5	14.4	17.8	16.9	16.4	16.6	19.7	18.5	15.9	-2.6	25.5	25.2	28.1	26.8	28.1	27.6	28.9	30.1	29.3	28.2	29.5	+1.3
Parental Education:[a]																								
1.0-2.0 (Low)	21.8	21.8	19.7	20.4	23.2	20.1	22.5	20.0	23.7	22.5	21.0	-1.5	25.7	25.6	26.8	25.5	30.5	27.2	25.5	26.5	28.4	27.5	26.3	-1.2
2.5-3.0	15.1	16.0	15.6	17.1	17.8	18.4	16.2	16.4	19.6	18.7	16.6	-2.1	26.0	22.4	25.7	25.7	26.7	27.8	26.1	27.9	28.7	29.4	27.4	-2.0
3.5-4.0	12.8	13.0	13.9	14.8	15.0	15.9	15.8	14.5	16.1	13.2	13.9	+0.7	21.7	21.3	22.8	24.7	24.6	25.4	26.5	24.8	25.6	26.1	25.6	-0.4
4.5-5.0	10.2	10.3	10.3	11.8	11.0	13.1	11.7	10.9	11.0	10.0	9.8	-0.2	20.8	19.7	19.9	21.7	21.6	22.0	23.1	21.5	23.3	25.0	23.4	-1.6
5.5-6.0 (High)	9.8	9.5	10.1	11.2	10.5	12.1	10.6	10.7	11.2	11.0	8.1	-2.8s	22.4	19.5	20.4	19.3	19.0	24.0	24.0	21.5	24.9	24.6	23.1	-1.6
Race (2-year average):[b]																								
White	—	12.7	12.6	12.9	13.9	15.1	15.1	14.1	14.3	14.9	13.8	-1.1	—	23.2	23.0	24.5	25.4	26.2	26.9	27.0	27.2	28.1	27.4	-0.7
Black	—	9.6	10.7	11.8	10.8	10.4	9.8	9.0	9.9	10.0	9.0	-1.0	—	15.0	14.8	14.0	13.3	12.2	12.7	12.8	12.7	12.9	12.6	-0.3
Hispanic	—	20.4	21.4	22.3	22.0	21.0	20.7	20.4	20.9	19.1	17.6	-1.4	—	22.9	23.8	24.2	26.8	29.6	27.5	26.3	27.5	28.3	27.7	-0.6

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-45

Alcohol: Trends in Two-Week Prevalence of Five or More Drinks in a Row by Subgroups for Twelfth Graders

	Percentage reporting 5+ drinks in a row on one or more occasions																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	36.8	37.1	39.4	40.3	41.2	41.2	41.4	40.5	40.8	38.7	36.7	36.8	37.5	34.7	33.0	32.2	29.8	27.9	27.5	28.2	29.8	30.2	31.3	31.5	30.8	30.0	29.7	-0.3
Gender:																												
Male	49.0	47.9	50.0	51.4	51.9	52.1	51.6	49.8	50.4	47.5	45.3	46.1	46.1	43.0	41.2	39.1	37.8	35.6	34.6	37.0	36.9	37.0	37.9	39.2	38.1	36.7	36.0	-0.7
Female	26.4	25.9	29.3	29.6	30.9	30.5	30.8	31.1	31.0	29.6	28.2	28.1	29.2	26.5	24.9	24.4	21.2	20.3	20.7	20.2	23.0	23.5	24.4	24.0	23.6	23.5	23.7	+0.1
College Plans:																												
None or under 4 years	—	41.8	44.7	44.3	44.5	46.3	46.7	45.7	44.9	43.5	41.6	41.3	42.7	38.5	38.2	35.8	34.4	32.8	32.7	34.0	35.2	33.9	36.2	36.3	35.4	35.7	35.9	+0.2
Complete 4 years	—	31.5	33.9	35.9	37.7	36.9	37.4	36.5	37.2	34.6	33.0	34.1	35.0	32.8	30.5	30.3	27.9	26.0	25.8	26.3	27.8	28.8	29.5	30.0	29.5	27.6	27.8	+0.1
Region:																												
Northeast	43.0	40.8	40.0	43.5	47.4	48.0	49.3	43.3	42.2	42.9	42.4	37.1	37.2	34.3	33.3	37.2	33.4	25.8	30.3	29.2	31.2	33.7	33.5	33.5	33.7	35.1	31.8	-3.3
North Central	40.6	42.8	44.5	45.3	44.8	45.4	44.9	47.9	47.2	44.3	39.7	42.6	43.5	39.9	40.4	37.9	34.6	34.6	30.1	31.9	34.3	31.5	31.6	32.6	31.6	33.9	34.5	+0.7
South	32.1	30.8	36.3	36.4	36.7	34.4	34.7	34.6	37.6	33.5	29.7	31.7	33.4	30.4	28.5	27.2	26.3	24.7	27.1	26.9	28.6	30.2	30.6	30.7	30.0	24.9	26.6	+1.7
West	29.0	32.8	34.2	33.3	34.0	36.0	35.6	32.5	33.3	34.5	36.1	35.9	36.6	35.4	30.8	26.3	26.3	26.0	22.0	24.5	24.2	24.0	29.6	29.5	28.6	29.3	26.0	-3.3
Population Density:																												
Large MSA	37.9	37.0	38.1	39.5	42.2	44.8	43.4	40.9	38.8	37.9	37.6	36.4	34.8	32.5	28.8	34.5	28.6	25.5	27.6	26.8	28.3	29.8	29.9	27.9	27.1	29.7	29.0	-0.7
Other MSA	36.1	36.8	39.5	40.1	40.8	38.9	39.5	39.7	41.0	37.3	35.4	35.5	38.6	35.3	33.7	31.8	30.1	27.0	26.5	27.1	28.4	30.3	31.1	33.1	32.2	29.3	29.0	-0.3
Non-MSA	36.9	38.0	40.5	41.3	40.9	41.4	42.2	41.3	42.0	41.2	37.6	39.1	38.3	35.9	35.8	30.6	30.4	31.9	29.2	31.5	34.0	30.5	33.2	32.4	32.4	31.7	31.9	+0.3
Parental Education:[a]																												
(Low) 1.0-2.0	31.6	34.1	35.6	36.3	36.0	37.0	37.0	35.3	37.2	34.8	31.8	31.7	33.9	30.7	25.4	25.3	26.8	23.4	21.9	24.0	26.6	24.8	22.6	26.3	27.4	25.1	24.8	-0.3
2.5-3.0	37.5	41.1	41.8	40.9	42.3	43.3	43.2	41.4	41.2	39.8	38.2	37.9	38.9	35.7	34.0	32.7	29.9	28.1	27.6	28.5	31.2	28.6	30.4	30.3	30.8	29.2	30.2	+1.1
3.5-4.0	35.1	36.4	39.5	41.3	41.4	42.1	42.4	42.4	40.9	39.3	36.9	37.9	38.3	34.7	34.3	32.0	30.4	27.9	28.4	28.4	29.5	29.8	31.0	33.2	30.5	30.5	30.3	-0.2
4.5-5.0	34.4	36.9	37.2	42.4	43.8	40.8	40.8	41.9	41.9	38.6	37.1	37.1	37.2	35.1	34.2	34.5	29.9	28.1	28.4	29.3	29.9	32.4	32.4	32.3	30.6	29.9	30.9	+1.0
5.5-6.0 (High)	29.9	34.5	41.1	37.2	41.9	38.5	39.3	40.9	42.1	38.2	34.9	36.7	37.2	34.7	31.8	34.1	30.6	30.4	29.0	29.0	30.7	33.1	34.9	32.4	34.2	32.7	28.6	-4.1
Race (2-year average):[b]																												
White	—	—	40.5	42.4	43.5	44.3	44.9	44.9	44.5	43.6	41.5	40.3	40.9	40.0	37.9	36.6	34.6	32.1	31.3	31.5	32.3	33.4	35.1	36.4	35.7	34.6	34.5	-0.1
Black	—	—	19.0	19.3	18.9	17.7	17.1	17.1	18.3	17.2	15.7	16.4	15.8	15.2	15.7	14.4	11.7	11.3	12.6	14.4	14.9	15.3	13.4	12.3	12.3	11.5	11.8	+0.3
Hispanic	—	—	36.4	37.2	33.6	33.1	34.8	32.9	32.5	33.0	31.7	30.8	33.0	33.7	28.8	25.6	27.9	31.1	27.2	24.3	26.6	27.1	27.6	28.1	29.3	31.0	28.4	-2.6

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-46
Cigarettes: Trends in Thirty-Day Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percentage who used in last thirty days																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	14.3	15.5	16.7	18.6	19.1	21.0	19.4	19.1	17.5	14.6	12.2	-2.5sss	20.8	21.5	24.7	25.4	27.9	30.4	29.8	27.6	25.7	23.9	21.3	-2.6ss
Gender:																								
Male	15.5	14.9	17.2	19.3	18.8	20.6	19.1	18.0	16.7	14.3	12.2	-2.1s	20.8	20.6	24.6	26.6	27.7	30.1	28.2	26.2	25.2	23.8	20.9	-3.0ss
Female	13.1	15.9	16.3	17.9	19.0	21.1	19.5	19.8	17.7	14.7	12.0	-2.8ss	20.7	22.2	24.5	23.9	27.9	30.8	31.1	29.1	25.8	23.6	21.5	-2.1
College Plans:																								
None or under 4 yrs.	29.2	31.9	34.1	36.6	36.5	39.2	40.0	40.1	40.3	34.7	30.0	-4.7s	36.5	35.0	41.9	42.2	46.3	46.2	47.2	45.2	44.0	38.6	38.1	-0.5
Complete 4 yrs.	11.8	13.1	14.3	16.1	16.8	18.2	16.9	16.5	14.5	12.2	10.0	-2.1ss	17.3	18.6	21.0	21.7	24.7	27.8	26.8	24.5	22.7	21.5	18.5	-3.0ss
Region:																								
Northeast	13.7	14.4	15.0	17.8	18.6	22.1	18.0	15.6	15.7	13.7	11.4	-2.3	22.4	21.9	27.1	24.5	27.8	31.7	29.3	30.1	28.0	23.9	18.1	-5.8ss
North Central	15.5	16.5	16.3	18.5	20.9	23.2	20.0	22.3	21.3	17.1	12.0	-5.2sss	22.9	24.3	26.0	28.8	30.1	32.5	31.7	29.5	30.2	27.1	24.2	-2.9
South	15.7	17.0	18.2	19.5	19.4	21.1	21.0	21.1	18.7	14.7	14.3	-0.3	21.2	19.8	24.0	25.7	30.8	33.4	32.2	29.8	26.3	25.5	23.5	-2.0
West	10.0	12.2	16.4	18.0	16.5	17.1	17.1	15.1	12.1	12.2	9.3	-2.9	16.7	20.2	21.2	20.1	19.6	20.8	23.2	19.6	17.5	16.8	15.0	-1.8
Population Density:																								
Large MSA	12.8	15.0	14.1	15.5	16.5	19.4	15.8	16.4	12.7	12.1	9.3	-2.8s	19.7	21.6	22.5	22.3	23.3	26.2	26.6	22.5	22.9	23.1	17.3	-5.8ss
Other MSA	14.9	15.3	17.8	20.7	19.4	21.4	19.7	17.7	16.0	13.1	11.6	-1.5	20.3	20.3	23.8	26.3	28.9	31.1	28.9	26.6	25.0	21.3	20.5	-0.8
Non-MSA	14.8	16.4	17.9	17.8	21.5	22.1	22.8	24.8	26.1	21.1	16.9	-4.2s	22.7	23.7	28.2	26.7	31.3	33.9	34.9	35.7	30.4	29.4	27.6	-1.8
Parental Education:[a]																								
1.0-2.0 (Low)	26.2	24.1	23.3	26.1	25.3	26.5	26.9	26.7	26.6	22.0	20.3	-1.7	23.5	28.4	29.5	26.4	30.9	28.7	28.2	28.0	30.5	29.3	22.5	-6.9ss
2.5-3.0	16.4	16.9	19.8	20.6	22.7	24.4	22.4	23.9	23.5	19.6	16.4	-3.2s	24.1	23.3	28.0	29.1	33.2	33.8	33.2	33.0	29.6	26.8	25.7	-1.1
3.5-4.0	13.9	14.9	17.4	20.1	20.8	21.4	20.9	21.4	17.0	14.7	12.6	-2.0	20.4	20.6	24.8	26.0	27.8	31.6	30.9	27.3	26.0	25.3	21.1	-4.3ss
4.5-5.0	10.1	13.3	12.5	14.9	14.9	18.4	16.2	14.2	12.3	10.2	8.3	-1.8	18.5	19.5	20.1	22.6	25.9	28.7	28.5	25.7	22.4	21.2	18.9	-2.2
5.5-6.0 (High)	11.3	11.5	13.3	15.1	14.5	17.3	15.3	13.8	12.2	9.8	6.9	-2.9s	18.5	18.9	21.4	20.7	21.8	27.8	24.6	22.5	21.4	19.1	17.1	-2.0
Race (2-year average):[b]																								
White	—	16.2	17.8	18.9	20.7	22.7	22.8	21.5	20.1	17.7	14.7	-3.1ss	—	24.1	26.0	27.8	29.7	32.9	34.4	33.2	30.8	28.2	25.7	-2.5s
Black	—	5.3	6.6	8.7	8.9	9.6	10.9	10.6	10.7	9.6	8.2	-1.3	—	6.6	7.5	9.8	11.5	12.2	12.8	13.7	12.5	11.1	11.1	0.0
Hispanic	—	16.7	18.3	21.3	21.6	19.6	19.1	20.1	20.5	16.6	13.0	-3.7s	—	18.3	20.5	19.4	21.4	23.7	23.0	21.3	21.1	19.6	16.8	-2.8

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-47
Cigarettes: Trends in Thirty-Day Prevalence of Use by Subgroups for Twelfth Graders

	Percentage who used in last thirty days																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	36.7	38.8	38.4	36.7	34.4	30.5	29.4	30.0	30.3	29.3	30.1	29.6	29.4	28.7	28.6	29.4	28.3	27.8	29.9	31.2	33.5	34.0	36.5	35.1	34.6	31.4	29.5	-2.0
Gender:																												
Male	37.2	37.7	36.6	34.5	31.2	26.8	26.5	26.8	28.0	25.9	28.2	27.9	27.0	28.0	27.7	29.1	29.0	29.2	30.7	32.9	34.5	34.9	37.3	36.3	35.4	32.8	29.7	-3.2s
Female	35.9	39.1	39.6	38.1	37.1	33.4	31.6	32.6	31.6	31.9	31.4	30.6	31.4	28.9	29.0	29.2	27.5	26.1	28.7	29.2	32.0	32.4	35.2	33.3	33.5	29.7	28.7	-1.0
College Plans:																												
None or under 4 years	—	46.3	46.2	44.6	43.0	39.6	38.1	38.7	38.0	37.9	40.5	38.5	39.7	37.5	38.0	37.5	38.1	38.6	37.3	40.9	43.5	45.0	45.7	46.7	44.9	43.6	40.8	-2.9
Complete 4 years	—	29.8	29.4	27.4	26.0	22.3	22.3	22.1	23.3	22.7	22.8	24.0	24.3	24.4	24.1	25.4	24.2	23.8	27.3	28.0	29.9	30.8	33.1	31.3	31.4	27.3	25.9	-1.4
Region:																												
Northeast	40.1	41.8	43.0	40.6	37.0	34.1	31.5	32.1	34.6	33.5	34.2	35.2	34.1	31.2	29.4	31.9	30.5	29.6	34.2	33.2	34.4	38.5	40.6	35.9	34.2	33.1	30.3	-2.8
North Central	39.5	41.3	40.5	39.0	36.6	31.5	32.4	33.5	33.2	31.4	34.1	32.5	31.7	31.1	34.9	34.0	34.6	31.7	33.2	36.2	37.8	37.7	39.3	40.0	37.8	35.6	35.9	+0.3
South	36.2	39.1	37.6	35.7	35.4	31.8	28.9	29.4	28.7	28.6	25.6	26.1	26.0	28.0	26.4	26.1	25.4	26.4	29.0	30.7	33.5	33.2	35.0	34.3	36.2	29.6	25.9	-3.7
West	26.3	28.3	27.7	27.3	24.8	21.2	21.8	20.4	21.8	22.9	26.3	23.3	26.6	23.9	22.7	25.1	23.2	22.8	22.9	24.0	26.5	24.4	30.5	29.1	27.6	28.1	25.2	-2.9
Population Density:																												
Large MSA	39.7	40.4	40.9	37.5	33.4	31.2	30.6	32.1	30.8	31.3	31.9	30.8	29.3	26.9	25.9	27.9	26.2	25.6	29.5	29.0	33.9	32.1	34.9	32.9	30.0	27.4	27.3	-0.1
Other MSA	35.1	35.9	36.1	34.3	33.5	29.7	27.4	27.8	29.1	28.2	28.5	28.0	28.2	28.3	28.2	29.6	29.3	26.9	29.8	31.1	31.7	32.6	35.7	34.2	35.0	31.5	28.2	-3.3s
Non-MSA	36.7	40.9	39.2	39.4	36.4	30.9	30.9	31.2	31.5	29.3	30.8	31.0	31.8	31.4	32.2	30.4	28.6	31.5	30.3	33.8	36.2	38.2	40.0	39.7	38.7	36.3	34.3	-2.0
Parental Education:[a]																												
(Low)																												
1.0-2.0	37.2	43.2	39.6	38.1	38.1	32.7	32.5	32.6	32.7	33.6	32.3	28.6	28.8	28.1	25.4	26.3	31.3	27.1	26.5	26.2	31.2	31.5	31.2	32.3	33.0	31.3	24.8	-6.6s
2.5-3.0	37.0	41.2	40.8	39.3	35.9	34.2	31.7	32.0	32.2	31.8	32.3	32.3	31.4	29.9	30.8	30.8	28.7	30.3	30.4	32.8	35.0	35.5	36.5	36.0	37.3	32.2	31.5	-0.7
3.5-4.0	31.9	35.3	37.3	34.0	33.3	28.0	28.2	29.0	28.0	28.1	29.7	29.7	28.8	27.8	29.4	29.3	28.4	27.8	29.9	31.4	33.2	33.2	35.6	36.7	35.0	32.8	30.3	-2.5
4.5-5.0	32.3	35.0	33.0	32.6	30.1	25.7	26.0	25.5	27.8	25.2	27.7	26.4	27.6	28.6	27.0	29.1	26.9	25.8	30.1	32.0	32.6	34.5	37.5	34.2	32.4	30.2	29.3	-0.9
5.5-6.0	26.8	30.8	32.8	31.9	29.6	24.0	22.5	25.1	25.5	23.7	22.6	26.7	29.3	27.8	26.3	28.6	27.1	25.5	30.5	30.4	34.0	32.9	38.5	33.1	34.4	27.4	25.0	-2.4
(High)																												
Race (2-year average):[b]																												
White	—	—	38.3	37.6	36.0	33.0	30.5	30.7	31.3	31.2	31.3	31.9	32.1	32.2	32.2	32.3	32.2	31.8	33.2	35.2	36.6	38.1	40.7	41.7	40.1	37.9	35.3	-2.6
Black	—	—	36.7	32.7	30.2	26.8	23.7	21.8	21.2	19.3	18.1	16.9	14.2	13.3	12.6	12.2	10.6	8.7	9.5	10.9	12.9	14.2	14.3	14.9	14.9	14.3	13.3	-1.0
Hispanic	—	—	35.7	32.8	26.8	22.6	23.2	24.7	24.7	25.3	25.5	23.7	22.7	21.9	20.6	21.7	24.0	25.0	24.2	23.6	25.1	25.4	25.9	26.6	27.3	27.7	23.8	-3.8

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-48
Cigarettes: Trends in Thirty-Day Prevalence of Daily Use by Subgroups for Eighth and Tenth Graders

	Percentage who used daily in last thirty days																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	7.2	7.0	8.3	8.8	9.3	10.4	9.0	8.8	8.1	7.4	5.5	-1.9sss	12.6	12.3	14.2	14.6	16.3	18.3	18.0	15.8	15.9	14.0	12.2	-1.8s
Gender:																								
Male	8.1	6.9	8.8	9.5	9.2	10.5	9.0	8.1	7.4	7.0	5.9	-1.1	12.4	12.1	13.8	15.2	16.3	18.1	17.2	14.7	15.6	13.7	12.4	-1.3
Female	6.2	7.2	7.8	8.0	9.2	10.1	8.7	9.0	8.4	7.5	4.9	-2.5sss	12.5	12.4	14.3	13.7	16.1	18.6	18.5	16.8	15.9	14.1	11.9	-2.2s
College Plans:																								
None or under 4 yrs.	18.5	20.1	21.5	22.6	22.5	26.0	25.4	25.2	25.2	21.7	17.7	-4.0s	25.7	25.5	28.9	28.9	32.7	34.3	35.4	31.7	32.1	28.8	27.3	-1.5
Complete 4 yrs.	5.3	5.1	6.4	6.8	7.5	8.0	6.9	6.6	5.9	5.6	3.9	-1.6sss	9.6	9.5	11.0	11.5	13.3	15.5	15.0	12.9	13.2	11.6	9.6	-2.0ss
Region:																								
Northeast	7.2	7.1	7.1	8.6	9.2	11.0	8.8	6.1	7.2	6.9	6.1	-0.8	14.3	13.1	16.3	14.1	15.8	18.8	18.0	18.7	17.7	14.1	11.0	-3.2
North Central	7.8	7.6	8.5	9.4	11.0	12.4	10.3	11.2	11.5	9.0	6.4	-2.6s	14.3	14.3	15.1	16.9	17.6	20.6	19.5	17.3	19.6	16.3	13.2	-3.1s
South	7.9	7.8	9.3	9.4	9.4	10.4	9.5	10.2	8.5	7.8	6.1	-1.6	12.8	11.4	13.9	15.5	19.3	20.5	20.5	17.1	16.3	15.7	14.3	-1.3
West	4.6	4.8	7.4	7.4	7.0	7.5	6.8	5.8	3.8	4.9	2.6	-2.3s	9.1	10.7	10.9	9.7	9.4	10.7	11.1	8.8	9.1	7.8	7.0	-0.7
Population Density:																								
Large MSA	6.3	6.3	5.7	6.6	7.6	9.5	7.0	6.7	5.4	5.6	4.1	-1.5	12.3	11.7	12.3	12.0	12.6	15.3	15.7	12.2	13.2	13.8	9.6	-4.2ss
Other MSA	7.7	7.2	9.1	9.5	9.3	10.2	8.7	7.9	7.4	6.3	5.4	-0.9	11.7	11.6	13.6	15.5	17.5	18.8	16.9	15.1	15.5	12.1	11.6	-0.5
Non-MSA	7.3	7.8	10.1	9.6	11.1	11.8	11.7	12.7	12.7	11.8	7.2	-4.6sss	14.3	14.5	16.9	15.5	18.4	20.8	22.5	21.1	19.7	17.5	16.3	-1.2
Parental Education:[a]																								
1.0-2.0 (Low)	15.9	11.9	12.7	13.0	15.8	13.6	14.3	13.0	14.7	13.1	11.1	-2.0	16.0	17.8	19.3	15.5	20.0	19.3	17.7	17.4	20.1	18.9	12.9	-5.9ss
2.5-3.0	8.6	8.4	9.7	11.3	11.3	14.0	11.7	12.0	11.4	11.3	7.5	-3.9sss	15.5	13.9	16.9	17.6	21.6	23.1	22.1	21.3	19.1	17.6	16.2	-1.4
3.5-4.0	6.5	6.9	8.5	8.9	9.4	10.1	9.2	9.7	8.1	6.7	5.1	-1.6s	12.0	11.8	13.6	15.9	17.0	19.4	18.9	14.9	16.6	14.2	12.2	-2.0
4.5-5.0	4.0	5.2	5.9	6.1	7.2	7.6	6.8	5.7	4.6	3.9	3.0	-0.9	10.6	10.5	10.7	11.5	12.6	14.8	15.6	12.9	13.0	11.5	9.7	-1.8
5.5-6.0 (High)	4.9	4.2	6.3	5.8	5.7	7.4	5.5	5.2	5.1	4.1	3.1	-1.1	9.6	9.0	10.5	9.6	10.3	13.6	12.0	11.1	11.2	9.8	8.3	-1.5
Race (2-year average):[b]																								
White	—	7.7	8.8	9.7	10.5	11.7	11.4	10.4	9.7	9.0	7.5	-1.5	—	14.5	15.3	16.5	17.6	20.0	21.4	20.3	19.1	17.7	15.5	-2.2s
Black	—	1.4	1.8	2.6	2.8	3.2	3.7	3.8	3.8	3.2	2.8	-0.4	—	2.8	3.1	3.8	4.7	5.1	5.6	5.8	5.3	5.2	5.2	0.0
Hispanic	—	7.3	7.2	9.0	9.2	8.0	8.1	8.4	8.5	7.1	5.0	-2.1	—	8.4	8.9	8.1	9.9	11.6	10.8	9.4	9.1	8.8	7.4	-1.4

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-49
Cigarettes: Trends in Thirty-Day Prevalence of Daily Use by Subgroups for Twelfth Graders

Percentage who used daily in last thirty days

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	26.9	28.8	28.8	27.5	25.4	21.3	20.3	21.1	21.2	18.7	19.5	18.7	18.7	18.1	18.9	19.1	18.5	17.2	19.0	19.4	21.6	22.2	24.6	22.4	23.1	20.6	19.0	-1.6
Gender:																												
Male	26.9	28.0	27.1	26.0	22.3	18.5	18.1	18.2	19.2	16.0	17.8	16.9	16.4	17.4	17.9	18.6	18.8	17.2	19.4	20.4	21.7	22.2	24.8	22.7	23.6	20.9	18.4	-2.5s
Female	26.4	28.8	30.0	28.3	27.8	23.5	21.7	23.2	22.2	20.5	20.6	19.8	20.6	18.1	19.4	19.3	17.9	16.7	18.2	18.1	20.8	21.8	23.6	21.5	22.2	19.7	18.9	-0.8
College Plans:																												
None or under 4 years	—	36.5	37.2	35.2	33.8	29.7	29.3	29.5	29.3	27.2	29.6	28.2	29.0	27.4	27.9	28.3	28.4	28.1	27.8	29.8	33.7	33.2	35.6	34.6	34.2	31.7	30.1	-1.6
Complete 4 years	—	19.8	19.3	18.3	17.0	13.8	12.9	13.2	13.8	11.9	12.4	12.8	13.3	13.4	14.6	14.7	14.1	12.9	15.9	15.7	17.4	18.9	20.6	18.4	19.5	16.6	15.5	-1.1
Region:																												
Northeast	31.4	32.3	33.8	32.5	28.6	24.1	23.3	23.4	26.1	23.6	24.9	24.9	24.8	21.4	21.3	22.8	20.9	19.4	23.5	21.3	22.5	27.0	29.4	23.4	23.2	22.8	21.9	-0.9
North Central	28.6	30.2	29.4	28.6	27.0	22.0	23.0	24.0	23.4	20.4	22.4	19.9	20.3	19.0	23.0	22.2	23.0	19.0	21.3	23.8	25.7	26.1	28.0	27.8	25.9	23.6	25.2	+1.6
South	26.2	29.1	28.7	26.4	25.8	22.6	19.1	20.2	19.4	17.7	16.0	15.8	15.7	17.7	17.1	16.5	16.4	16.7	18.5	19.3	21.7	20.5	22.6	21.8	24.2	19.4	15.5	-3.9s
West	17.3	19.4	19.2	19.1	17.0	14.0	13.1	12.7	13.0	12.4	14.2	13.4	14.9	14.0	13.8	14.8	13.9	13.3	13.0	12.4	14.5	13.8	17.5	15.5	17.3	16.9	13.4	-3.6
Population Density:																												
Large MSA	30.8	30.4	30.9	29.2	24.5	21.6	21.9	23.5	22.1	21.5	21.9	20.6	20.3	18.0	16.7	19.0	16.7	16.6	17.3	17.7	21.3	20.7	23.7	20.6	18.6	16.7	17.4	+0.7
Other MSA	25.6	27.1	27.2	25.7	25.0	21.3	19.0	19.3	20.2	17.4	17.7	17.0	17.6	17.7	19.0	19.0	19.0	15.9	19.7	19.2	19.9	21.9	23.9	21.2	22.8	21.1	17.5	-3.6s
Non-MSA	25.8	29.5	29.1	28.7	26.5	21.2	20.7	21.3	21.7	18.2	19.9	19.8	19.3	18.8	20.9	19.5	19.0	20.3	19.2	21.6	24.8	24.1	26.8	27.2	28.5	24.5	23.9	-0.6
Parental Education:[a]																												
(Low)																												
1.0-2.0	27.2	32.7	29.6	28.6	29.1	23.7	24.1	24.6	24.0	23.2	22.7	20.4	19.7	19.2	17.1	16.7	21.2	16.5	17.6	16.9	21.3	21.1	21.9	21.7	23.8	22.8	16.4	-6.4s
2.5-3.0	27.2	31.3	31.5	30.3	26.5	24.7	22.5	23.1	23.2	21.5	21.8	21.4	21.1	19.6	21.5	21.0	19.8	20.4	20.2	22.4	24.6	24.4	26.0	24.7	26.9	22.9	21.9	-1.0
3.5-4.0	22.1	25.8	28.1	24.8	24.5	19.4	19.0	19.7	18.8	16.4	19.3	19.4	17.8	17.5	19.0	19.3	18.5	16.9	18.9	18.9	21.6	21.2	23.8	23.8	23.6	21.2	19.9	-1.3
4.5-5.0	22.9	24.5	23.7	23.2	21.2	16.6	16.1	16.8	17.5	14.1	16.0	13.9	16.5	16.5	17.2	18.3	16.2	15.0	18.9	18.7	19.7	22.4	24.9	20.6	20.6	18.6	17.9	-0.7
5.5-6.0	17.4	22.8	21.7	22.8	20.6	15.0	13.9	14.5	17.2	14.1	11.2	13.6	16.6	15.1	15.8	16.5	16.1	12.8	16.6	17.3	18.5	20.0	22.9	17.4	19.0	15.2	13.4	-1.8
(High)																												
Race (2-year average):[b]																												
White	—	—	28.9	28.3	26.9	23.9	21.4	21.6	22.1	21.0	20.4	20.6	20.5	20.6	21.1	21.8	21.5	20.5	21.4	22.9	23.9	25.4	27.8	28.3	26.9	25.7	23.8	-2.0
Black	—	—	24.9	22.7	20.9	17.4	14.6	13.1	12.5	10.7	9.9	9.4	7.9	7.3	6.4	5.8	5.1	4.2	4.1	4.9	6.1	7.0	7.2	7.4	7.7	8.0	7.5	-0.5
Hispanic	—	—	22.6	20.4	15.8	12.8	13.6	14.3	14.9	13.9	11.8	11.3	11.0	10.9	10.8	10.9	11.5	12.5	11.8	10.6	11.6	12.9	14.0	13.6	14.0	15.7	12.0	-3.7

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-50
Cigarettes: Trends in Thirty-Day Prevalence of Use of Half-pack a Day or More by Subgroups for Eighth and Tenth Graders

Percentage who used daily in last thirty days

8th Grade

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*	
Total	3.1	2.9	3.5	3.6	3.4	4.3	3.5	3.6	3.3	2.8	2.3	-0.4
Gender:												
Male	3.7	3.1	4.3	4.2	3.7	4.7	3.7	3.5	3.1	2.8	2.6	-0.2
Female	2.4	2.7	2.7	2.9	3.2	3.7	3.1	3.3	3.3	2.6	2.0	-0.5
College Plans:												
None or under 4 yrs.	10.1	10.8	11.9	11.7	11.4	13.5	11.6	13.8	13.4	10.3	9.8	-0.5
Complete 4 yrs.	1.9	1.7	2.2	2.4	2.3	2.8	2.4	2.2	2.0	1.8	1.4	-0.4
Region:												
Northeast	3.3	2.8	2.7	3.7	3.7	4.1	3.7	2.1	3.1	3.3	2.6	-0.8
North Central	3.3	3.2	3.5	3.9	4.4	5.3	4.1	4.6	5.7	3.4	3.1	-0.2
South	3.4	3.3	4.6	3.9	3.6	4.5	3.7	4.8	2.9	2.8	2.7	-0.2
West	1.9	2.0	2.2	2.6	1.8	2.7	2.2	1.6	1.2	1.3	0.7	-0.6
Population Density:												
Large MSA	2.4	2.3	2.1	3.0	2.5	3.7	2.7	2.3	1.8	2.1	1.5	-0.6
Other MSA	3.3	3.2	3.7	3.9	3.6	3.8	3.2	3.2	2.8	2.2	2.1	-0.2
Non-MSA	3.4	3.3	5.0	3.7	4.3	5.8	4.8	5.6	5.9	4.6	3.9	-0.7
Parental Education:[a]												
1.0-2.0 (Low)	7.9	6.5	6.4	5.1	8.2	6.5	6.4	6.2	6.2	7.1	5.2	-1.8
2.5-3.0	3.7	3.4	3.9	4.9	4.1	6.4	4.8	5.2	4.8	3.8	3.6	-0.2
3.5-4.0	2.5	2.6	3.6	3.4	3.6	3.2	3.5	3.7	3.4	2.3	2.0	-0.2
4.5-5.0	1.6	1.8	2.3	2.6	2.0	2.8	2.2	2.0	1.5	1.4	0.9	-0.6
5.5-6.0 (High)	1.8	1.5	2.2	2.2	1.5	2.7	1.8	2.1	1.8	1.5	1.4	-0.2
Race (2-year average):[b]												
White	—	3.3	3.8	4.2	4.2	4.6	4.6	4.2	4.0	3.6	3.2	-0.5
Black	—	0.4	0.7	1.0	0.9	1.3	1.4	1.2	1.3	1.0	1.1	+0.1
Hispanic	—	2.7	2.5	3.1	3.3	2.7	2.4	2.8	3.0	2.3	1.4	-0.9

10th Grade

	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	6.5	6.0	7.0	7.6	8.3	9.4	8.6	7.9	7.6	6.2	5.5	-0.6
Gender:												
Male	6.9	6.5	7.8	8.2	8.7	9.9	8.9	8.1	7.8	6.7	6.0	-0.8
Female	6.0	5.1	6.2	6.7	7.7	9.0	8.2	7.8	7.3	5.6	5.1	-0.5
College Plans:												
None or under 4 yrs.	15.9	15.3	18.5	18.5	20.9	22.4	22.0	20.6	18.9	16.0	16.0	0.0
Complete 4 yrs.	4.4	4.0	4.6	5.2	6.1	7.1	6.3	5.6	5.7	4.5	3.8	-0.7
Region:												
Northeast	7.8	5.9	8.5	7.8	7.7	9.1	8.8	10.0	9.1	6.0	5.0	-1.0
North Central	7.1	7.3	7.7	8.3	9.5	10.9	9.3	9.1	9.9	8.1	6.0	-2.2s
South	7.2	5.5	7.1	8.7	10.3	11.0	10.2	8.9	7.8	7.1	6.5	-0.7
West	4.0	5.0	4.3	4.2	3.4	5.0	4.4	3.0	3.0	2.2	3.3	+1.2
Population Density:												
Large MSA	6.9	5.2	5.9	5.8	6.0	7.6	6.6	5.8	6.0	5.7	4.8	-1.0
Other MSA	5.8	5.8	6.7	8.5	9.2	9.5	8.0	7.7	7.6	5.6	5.0	-0.6
Non-MSA	7.6	6.9	8.7	7.8	9.2	11.5	12.0	11.0	9.4	7.8	7.5	-0.3
Parental Education:[a]												
1.0-2.0 (Low)	9.9	10.7	10.8	8.1	12.0	12.1	10.8	9.0	11.3	10.7	7.6	-3.1
2.5-3.0	8.9	6.9	8.5	10.1	12.2	13.1	11.4	11.6	10.4	8.5	8.3	-0.2
3.5-4.0	5.8	5.4	7.3	8.0	8.6	10.2	8.8	7.4	7.4	5.9	5.3	-0.7
4.5-5.0	4.7	4.7	4.3	5.4	5.0	6.2	6.5	5.9	5.5	4.3	3.9	-0.3
5.5-6.0 (High)	4.5	3.7	3.9	4.0	4.0	5.7	4.8	5.4	4.5	3.6	2.6	-1.0
Race (2-year average):[b]												
White	—	7.4	7.7	8.6	9.3	10.5	11.0	10.4	9.9	8.5	7.1	-1.3s
Black	—	0.8	0.6	1.2	1.8	1.6	1.7	1.8	1.5	1.9	1.7	-0.2
Hispanic	—	3.0	3.0	2.6	3.4	4.3	3.3	3.0	3.1	2.9	2.7	-0.2

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.
SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-51
Cigarettes: Trends in Thirty-Day Prevalence of Use of Half-pack a Day or More by Subgroups for Twelfth Graders

	Percentage who used daily in last thirty days																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	17.9	19.2	19.4	18.8	16.5	14.3	13.5	14.2	13.8	12.3	12.5	11.4	11.4	10.6	11.2	11.3	10.7	10.0	10.9	11.2	12.4	13.0	14.3	12.6	13.2	11.3	10.3	-1.0
Gender:																												
Male	19.6	19.9	19.7	18.9	15.4	13.5	12.8	13.1	13.1	11.0	12.3	10.7	10.1	11.1	11.2	11.6	11.6	10.4	11.6	12.7	13.2	13.6	15.5	13.5	14.5	11.4	10.2	-1.3
Female	16.1	18.0	18.9	18.0	17.1	14.7	13.8	14.7	13.6	12.8	12.0	11.6	12.5	9.7	10.7	10.8	9.5	9.2	9.9	9.5	11.1	12.0	12.6	11.1	11.5	10.8	10.2	-0.6
College Plans:																												
None or under 4 years	—	25.5	26.9	25.5	23.3	21.2	20.8	21.0	20.9	19.6	20.7	19.2	19.5	18.4	18.6	19.2	18.7	19.1	18.7	19.6	22.6	23.1	23.5	23.7	23.2	20.3	19.3	-1.0
Complete 4 years	—	11.9	11.2	11.1	9.8	8.2	7.5	7.8	7.6	6.5	6.5	6.4	7.2	6.8	7.5	7.5	7.1	6.5	8.1	8.2	8.9	10.0	11.0	8.9	10.1	8.1	7.6	-0.5
Region:																												
Northeast	22.0	22.5	24.2	23.6	19.8	17.0	16.6	15.6	16.6	17.4	17.0	15.6	16.5	13.1	13.6	13.8	12.9	11.1	14.7	12.2	13.4	17.0	19.4	13.6	13.4	13.6	12.3	-1.3
North Central	18.8	20.3	20.3	19.8	17.4	15.4	16.0	17.3	17.1	13.0	14.9	12.3	12.3	11.5	14.2	13.7	14.1	11.0	12.5	15.3	14.2	15.1	16.9	16.8	15.0	13.7	14.8	+1.2
South	16.8	19.0	18.5	17.0	16.1	14.5	12.0	13.3	12.4	11.3	9.7	10.0	9.4	10.1	9.7	9.4	8.9	10.2	10.4	10.8	12.6	12.0	12.3	11.8	13.9	10.6	7.6	-3.0ss
West	11.3	12.4	11.5	12.2	10.8	8.3	7.3	7.1	6.4	7.4	7.6	6.5	8.1	7.7	6.9	8.3	7.2	6.8	6.0	5.9	8.4	6.5	8.2	7.5	9.0	7.5	6.6	-1.0
Population Density:																												
Large MSA	21.7	20.1	20.4	19.7	16.2	14.8	15.4	15.9	14.1	14.8	14.4	12.2	13.1	10.8	10.1	11.2	10.2	9.9	9.1	10.2	12.3	11.6	12.8	11.0	9.6	8.2	9.4	+1.1
Other MSA	17.4	18.9	18.8	17.9	16.5	13.8	12.4	12.9	13.5	11.4	11.0	9.6	10.0	10.4	11.2	11.0	10.7	8.4	11.2	10.5	11.1	12.8	14.3	11.7	12.6	11.6	9.4	-2.2s
Non-MSA	15.9	19.0	19.5	19.3	16.7	14.7	13.6	14.2	14.0	11.5	12.9	13.3	12.5	10.7	12.1	12.1	11.1	13.1	11.7	13.7	14.7	14.4	16.0	16.5	18.0	14.5	13.3	-1.2
Parental Education:[a]																												
(Low)																												
1.0-2.0	18.6	21.3	20.0	19.2	19.5	16.3	16.0	17.1	17.1	16.4	16.1	15.6	13.8	11.2	11.5	10.2	12.5	11.0	10.7	9.5	13.5	13.6	11.9	12.5	15.0	16.1	10.8	-5.3s
2.5-3.0	17.7	21.4	22.2	21.0	17.6	16.8	15.6	15.9	15.2	14.8	14.2	13.3	13.9	12.4	13.5	13.4	12.4	12.7	12.5	13.7	15.1	14.8	16.4	14.9	16.6	13.8	12.5	-1.3
3.5-4.0	13.9	17.4	18.3	16.9	15.2	12.8	12.5	13.3	11.9	10.5	12.0	11.0	10.5	10.3	10.7	11.6	10.7	9.6	10.4	11.0	12.7	12.3	13.9	13.8	13.1	10.7	10.6	-0.1
4.5-5.0	15.9	15.9	14.8	15.4	12.6	10.3	10.1	10.1	10.5	8.0	9.5	6.8	8.9	8.6	9.2	10.2	7.9	8.1	10.0	10.4	9.8	12.6	14.5	10.3	10.7	9.3	9.2	-0.1
5.5-6.0	9.1	15.9	14.6	14.5	13.6	9.8	8.8	9.3	9.3	7.9	5.4	7.4	8.4	8.3	8.4	7.9	9.0	5.7	8.3	8.8	9.1	10.8	11.2	7.4	9.5	7.1	6.2	-0.9
(High)																												
Race (2-year average):[b]																												
White	—	—	20.3	20.2	18.6	16.4	15.0	15.1	15.2	14.2	13.6	13.1	12.9	12.9	12.9	13.3	13.1	12.3	12.8	13.7	14.2	15.2	16.9	16.9	15.9	15.1	13.6	-1.5
Black	—	—	10.7	9.7	9.1	7.1	5.8	5.4	4.9	4.1	3.9	3.6	2.9	2.3	1.9	1.8	1.8	1.8	1.5	1.7	2.2	2.5	2.8	2.5	2.4	2.6	2.4	-0.2
Hispanic	—	—	11.3	9.0	6.4	5.6	6.1	5.6	5.9	6.1	5.3	5.0	4.1	3.5	4.2	4.2	4.0	4.6	4.5	4.0	4.1	5.3	5.8	5.2	5.8	7.0	5.3	-1.8

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-52
Smokeless Tobacco: Trends in Thirty-Day Prevalence of Use by Subgroups for Eighth and Tenth Graders

	Percentage who used in last thirty days																							
	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	6.9	7.0	6.6	7.7	7.1	7.1	5.5	4.8	4.5	4.2	4.0	-0.2	10.0	9.6	10.4	10.5	9.7	8.6	8.9	7.5	6.5	6.1	6.9	+0.8
Gender:																								
Male	12.7	12.5	10.9	12.8	11.8	11.4	9.9	8.1	6.9	6.7	6.9	+0.2	18.7	18.1	19.3	19.2	17.2	15.0	14.9	13.8	12.2	11.4	12.7	+1.3
Female	1.4	2.0	2.7	2.4	2.9	2.9	1.5	1.5	2.1	1.8	1.4	-0.4	1.3	1.8	2.0	2.1	2.1	2.3	2.7	1.7	1.3	1.3	1.6	+0.3
College Plans:																								
None or under 4 yrs.	12.7	17.1	15.5	16.7	15.4	16.4	12.6	13.9	13.2	11.4	14.6	+3.2	16.9	17.5	20.2	19.9	20.3	16.3	18.5	17.8	13.2	13.9	16.0	+2.2
Complete 4 yrs.	6.1	5.5	5.3	6.5	6.0	5.6	4.6	3.8	3.5	3.4	2.9	-0.5	8.4	8.0	8.4	8.5	7.8	7.2	7.2	5.7	5.4	4.8	5.4	+0.6
Region:																								
Northeast	5.0	4.9	3.4	6.1	5.4	4.9	3.2	2.7	2.5	2.7	3.7	+1.0	8.6	5.3	8.0	9.0	7.6	6.8	9.3	6.5	5.2	4.6	4.9	+0.3
North Central	7.1	7.5	7.2	7.1	7.6	8.3	6.8	4.3	5.3	4.8	4.0	-0.8	11.0	9.6	10.0	10.0	11.0	9.5	7.1	7.9	8.1	6.2	7.0	+0.8
South	9.5	9.3	8.0	9.9	8.7	8.1	6.7	6.9	5.9	5.8	5.4	-0.4	11.6	11.4	11.8	11.7	10.9	10.2	10.2	9.5	7.9	7.7	9.6	+1.9
West	3.5	4.4	6.3	6.0	5.0	5.9	4.1	3.9	2.9	1.9	2.1	+0.2	7.8	10.9	11.1	10.9	7.7	6.0	8.2	4.6	4.0	4.5	3.0	-1.5
Population Density:																								
Large MSA	4.8	4.2	3.3	4.6	4.1	4.2	3.6	2.9	1.8	2.4	2.4	0.0	5.9	6.4	6.5	6.2	5.9	5.5	4.2	3.7	4.6	5.6	4.1	-1.5
Other MSA	6.2	6.9	6.8	6.4	6.7	7.1	4.7	4.1	3.9	3.9	3.5	-0.5	9.2	9.3	10.1	10.9	9.2	8.4	8.3	5.7	5.3	4.3	5.7	+1.4
Non-MSA	10.4	10.3	9.9	13.0	11.2	10.6	9.0	8.5	8.9	7.0	7.0	-0.1	14.7	13.3	14.1	13.9	15.0	12.2	14.7	15.1	11.3	9.8	12.5	+2.7
Parental Education:[a]																								
1.0-2.0 (Low)	11.4	7.8	9.4	8.9	10.6	6.3	8.3	5.4	6.6	7.4	5.0	-2.5	6.6	10.1	10.9	9.4	9.6	8.1	9.0	6.8	7.2	7.4	6.9	-0.5
2.5-3.0	8.4	8.5	7.5	8.4	9.9	8.8	6.0	5.1	5.7	5.2	5.4	+0.2	12.1	11.0	12.2	12.5	10.4	9.7	9.4	8.2	7.0	6.4	8.9	+2.5
3.5-4.0	6.7	7.0	7.5	8.7	7.0	7.2	6.5	5.9	4.5	4.5	3.7	-0.9	10.6	10.5	10.9	10.2	10.9	8.3	10.3	8.6	7.3	6.3	7.1	+0.8
4.5-5.0	4.8	7.0	5.2	6.1	5.0	6.8	4.8	4.4	3.3	2.9	2.5	-0.4	9.3	7.6	9.9	9.8	9.8	8.5	7.2	6.9	6.1	6.2	5.7	-0.5
5.5-6.0 (High)	6.1	4.6	4.9	6.8	5.8	5.9	3.7	3.9	3.1	3.0	4.2	+1.2	8.6	8.1	7.0	8.9	6.0	7.7	8.3	5.2	4.8	4.0	4.8	+0.9
Race (2-year average):[b]																								
White	—	8.3	8.0	8.1	8.9	8.8	7.6	6.1	5.4	5.2	4.8	-0.3	—	11.4	12.0	12.5	12.0	11.0	10.4	10.0	8.7	7.5	7.5	0.0
Black	—	1.8	2.7	3.2	2.6	2.2	2.6	2.3	2.3	2.7	2.2	-0.5	—	2.9	2.3	2.3	2.5	2.5	2.8	2.3	1.6	2.0	3.2	+1.2
Hispanic	—	4.2	4.0	5.0	5.7	5.2	4.6	4.5	4.6	3.7	3.3	-0.4	—	6.2	6.1	4.3	3.6	4.0	4.6	4.8	4.8	4.5	4.0	-0.5

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of two forms in 1991–96 and on two of four forms beginning in 1997; N is one-half of N indicated in Table D-58.

SOURCE: The Monitoring the Future Study, the University of Michigan.

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[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-53
Smokeless Tobacco: Trends in Thirty-Day Prevalence of Use by Subgroups for Twelfth Graders

Percentage who used in last thirty days

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990[a]	Class of 1991[a]	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	11.5	11.3	10.3	8.4	—	—	11.4	10.7	11.1	12.2	9.8	9.7	8.8	8.4	7.6	7.8	+0.2
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	22.3	22.8	19.9	15.9	—	—	20.8	19.7	20.3	23.6	19.5	18.7	15.6	15.5	14.4	14.2	-0.1
Female	—	—	—	—	—	—	—	—	—	—	—	1.6	0.7	1.7	1.2	—	—	2.0	2.3	2.6	1.8	1.1	1.2	1.5	1.3	1.3	1.6	+0.3
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	14.5	15.5	13.1	9.6	—	—	18.0	14.9	15.8	18.7	17.6	16.9	14.3	10.5	15.8	13.0	-2.8
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	9.8	9.0	8.8	7.7	—	—	9.4	9.4	9.3	9.9	7.6	7.4	7.1	7.6	5.4	6.1	+0.8
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	9.5	7.3	5.9	5.0	—	—	8.2	9.6	12.0	9.6	8.4	6.9	2.6	4.3	5.3	5.4	+0.1
North Central	—	—	—	—	—	—	—	—	—	—	—	13.5	11.3	10.8	8.3	—	—	12.3	13.6	14.7	16.7	12.6	13.4	11.8	8.9	11.1	9.9	-1.2
South	—	—	—	—	—	—	—	—	—	—	—	12.2	13.7	12.1	9.8	—	—	12.5	11.1	9.7	11.9	9.2	9.0	10.5	10.7	7.3	8.5	+1.2
West	—	—	—	—	—	—	—	—	—	—	—	9.3	11.7	10.9	9.1	—	—	11.1	7.0	8.5	8.6	8.5	9.1	7.3	7.0	6.3	6.2	-0.1
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	9.0	6.4	7.7	6.8	—	—	5.9	7.1	7.5	12.5	8.6	5.5	4.7	4.9	4.2	4.4	+0.2
Other MSA	—	—	—	—	—	—	—	—	—	—	—	8.9	10.5	8.5	7.6	—	—	11.1	9.9	11.3	9.5	7.4	7.4	7.7	8.5	7.9	8.0	+0.2
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	17.1	17.5	16.1	11.7	—	—	16.9	15.0	14.7	16.7	15.3	17.9	16.1	11.7	11.4	11.5	0.0
Parental Education:[b]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	8.6	11.7	10.7	5.3	—	—	14.9	7.0	12.3	9.8	6.3	5.8	6.1	5.4	4.3	6.3	+2.0
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	14.4	11.5	10.7	7.0	—	—	12.4	11.6	12.9	11.5	10.4	10.7	9.0	9.1	9.9	7.5	-2.4
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	11.5	12.1	10.6	9.0	—	—	12.4	10.8	9.8	12.8	9.1	10.4	9.8	8.8	8.9	8.6	-0.3
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	10.4	11.7	11.8	10.2	—	—	8.0	13.3	11.1	12.8	11.4	9.1	9.6	8.5	6.2	6.2	0.0
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	7.7	8.1	7.2	8.4	—	—	10.6	7.8	10.2	11.6	8.1	9.9	7.4	7.9	5.7	10.3	+4.6
Race (2-year average):[c]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	12.9	12.0	10.6	—	—	—	13.8	13.8	13.8	13.0	12.2	11.8	11.0	10.5	10.3	-0.2
Black	—	—	—	—	—	—	—	—	—	—	—	—	2.1	4.5	4.5	—	—	—	2.0	1.9	2.1	2.7	2.2	1.4	1.5	1.5	1.2	-0.3
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	4.4	5.2	5.1	—	—	—	6.0	5.4	7.6	8.1	5.3	4.3	3.9	3.8	3.2	-0.7

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.
Data based on one of six forms; N is one-sixth of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

CAUTION: Limited sample sizes (see "Notes" above). Use caution in interpreting subgroup trends.

[a] Prevalence of smokeless tobacco use was not asked of twelfth graders in 1990 and 1991. Prior to 1990 the prevalence of use question on smokeless tobacco was located near the end of one twelfth-grade questionnaire form, whereas after 1991 the question was placed earlier and in a different form. This shift could explain the discontinuities between the corresponding data.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-54
Smokeless Tobacco: Trends in Thirty-Day Prevalence of Daily Use by Subgroups for Eighth and Tenth Graders

Percentage who used daily in last thirty days

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	1.6	1.8	1.5	1.9	1.2	1.5	1.0	1.0	0.9	0.9	1.2	+0.3	3.3	3.0	3.3	3.0	2.7	2.2	2.2	2.2	1.5	1.9	2.2	+0.4
Gender:																								
Male	3.1	3.4	2.9	3.2	2.2	2.9	1.7	1.8	1.6	1.5	2.5	+0.9	6.3	6.3	6.4	5.9	5.2	4.2	4.0	4.3	3.2	3.9	4.5	+0.6
Female	0.2	0.3	0.3	0.3	0.3	0.2	0.3	0.2	0.2	0.3	0.1	-0.2	0.2	0.1	0.3	0.2	0.2	0.2	0.3	0.3	0.1	0.2	0.3	+0.1
College Plans:																								
None or under 4 yrs.	4.1	5.6	4.4	5.4	3.5	5.1	3.6	6.1	3.8	2.7	4.5	+1.9	7.6	8.5	8.8	6.5	7.8	5.4	6.3	6.4	3.6	5.9	6.6	+0.7
Complete 4 yrs.	1.2	1.2	1.1	1.4	0.9	1.0	0.6	0.5	0.5	0.7	0.9	+0.1	2.3	1.9	2.2	2.2	1.9	1.6	1.5	1.5	1.2	1.2	1.5	+0.3
Region:																								
Northeast	1.2	0.9	0.6	0.8	0.6	0.8	0.6	0.4	0.1	0.4	0.7	+0.3	1.8	1.0	1.7	3.0	2.0	1.3	1.5	1.2	1.2	0.9	1.1	+0.2
North Central	1.5	1.6	1.6	1.4	1.1	2.0	1.2	1.3	0.9	1.3	1.1	-0.1	3.1	2.9	2.5	2.4	2.5	2.1	1.4	2.1	2.0	2.1	2.1	0.0
South	2.4	3.0	2.2	3.3	1.8	2.0	1.5	1.3	1.6	1.3	2.1	+0.9	4.7	4.5	5.2	3.3	4.1	3.3	3.5	3.8	2.0	2.8	3.6	+0.8
West	0.6	0.8	1.0	0.9	0.8	0.8	0.2	0.7	0.3	0.2	0.1	-0.1	2.7	2.9	3.1	3.6	1.1	1.0	1.7	0.8	0.7	1.0	0.9	-0.1
Population Density:																								
Large MSA	0.5	0.6	0.7	0.7	0.4	0.4	0.5	0.4	0.3	0.2	0.3	+0.1	1.5	1.6	1.1	1.0	1.5	0.6	0.8	1.0	0.8	1.6	0.8	-0.8
Other MSA	1.2	1.9	1.5	1.0	0.9	1.2	0.8	0.6	0.8	0.8	0.8	0.0	3.1	2.8	3.2	3.5	2.3	2.3	1.7	1.5	1.0	1.0	1.7	+0.7
Non-MSA	3.3	2.8	2.5	4.6	2.6	3.4	1.6	2.6	1.8	2.0	2.9	+1.0	5.0	4.9	5.3	4.2	4.9	3.6	4.6	5.0	3.5	3.8	5.0	+1.2
Parental Education:[a]																								
1.0-2.0 (Low)	2.8	3.5	2.0	3.0	2.2	1.5	3.2	2.6	0.9	1.4	1.8	+0.4	2.5	3.9	4.1	3.2	3.6	1.7	3.8	2.6	1.7	2.4	3.8	+1.4
2.5-3.0	2.2	2.6	1.9	2.7	1.7	3.1	1.1	1.5	1.6	1.4	2.1	+0.6	4.8	5.0	4.3	3.8	3.4	3.4	2.0	2.8	1.7	2.3	3.2	+0.9
3.5-4.0	1.4	1.2	1.8	1.9	1.2	1.7	0.9	1.3	0.8	1.3	0.3	-1.0s	3.3	2.8	3.1	3.0	2.8	1.4	2.4	2.7	1.6	1.6	1.5	-0.1
4.5-5.0	0.8	1.3	1.1	1.1	0.9	0.3	0.8	0.5	0.5	0.4	0.5	0.0	2.5	1.7	2.5	2.7	2.9	2.3	1.7	1.8	1.6	1.9	1.9	0.0
5.5-6.0 (High)	1.0	0.9	0.6	0.7	0.8	0.8	0.4	0.5	0.4	0.4	1.7	+1.3s	2.5	1.6	2.7	1.7	1.0	1.4	1.9	0.7	0.8	0.8	1.9	+1.1
Race (2-year average):[b]																								
White	—	2.0	2.0	2.0	1.9	1.7	1.5	1.2	1.1	0.8	0.9	+0.1	—	3.8	3.9	3.8	3.3	2.9	2.5	2.7	2.4	1.7	1.9	+0.3
Black	—	0.3	0.4	0.7	0.6	0.4	0.5	0.4	0.4	0.4	0.3	0.0	—	0.5	0.4	0.6	0.5	0.4	0.4	0.4	0.3	0.2	0.6	+0.4
Hispanic	—	0.8	0.9	0.9	0.7	1.1	0.9	0.8	1.0	0.6	0.6	0.0	—	1.1	1.0	0.8	1.2	1.2	1.3	1.3	0.8	0.7	0.8	+0.1

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
'—' indicates data not available. '*' indicates less than .05 percent but greater than 0 percent.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases. See Appendix B for definition of variables in table.
Data based on one of two forms in 1991–96 and on two of four forms beginning in 1997; N is one-half of N indicated in Table D-58.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-55
Smokeless Tobacco: Trends in Thirty-Day Prevalence of Daily Use by Subgroups for Twelfth Graders

	Percentage who used daily in last thirty days																											
	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990[a]	Class of 1991[a]	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	4.7	5.1	4.3	3.3	—	—	4.3	3.3	3.9	3.6	3.3	4.4	3.2	2.9	3.2	2.8	-0.4
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	10.0	10.7	8.6	6.8	—	—	7.8	6.4	7.2	7.2	7.1	8.6	6.0	5.7	6.5	5.6	-0.9
Female	—	—	—	—	—	—	—	—	—	—	—	0.1	0.1	0.5	0.0	—	—	0.5	0.4	0.3	0.1	0.1	0.2	0.0	0.0	0.4	0.3	-0.1
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	7.1	7.8	5.8	4.2	—	—	7.4	4.3	6.6	6.5	6.8	9.1	6.5	3.4	7.9	4.7	-3.1
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	3.3	3.7	3.5	2.7	—	—	3.3	3.1	2.8	2.7	2.6	2.7	2.3	2.6	2.0	2.1	+0.2
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	4.6	2.1	2.3	1.3	—	—	1.8	1.9	4.5	2.2	3.2	3.5	0.5	1.0	1.3	1.5	+0.2
North Central	—	—	—	—	—	—	—	—	—	—	—	4.5	4.5	3.5	2.2	—	—	4.0	4.4	4.7	4.9	4.1	7.0	4.0	3.4	5.0	2.8	-2.2
South	—	—	—	—	—	—	—	—	—	—	—	6.1	7.4	6.3	4.2	—	—	5.4	4.0	3.5	4.2	3.1	3.6	4.6	4.0	4.0	3.8	-0.2
West	—	—	—	—	—	—	—	—	—	—	—	2.9	5.5	4.0	4.9	—	—	5.1	1.7	3.2	1.6	2.9	3.0	1.8	1.9	1.6	2.6	+1.0
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	3.4	3.3	3.0	3.0	—	—	2.0	1.7	2.0	2.1	2.6	3.3	0.9	0.5	0.9	1.4	+0.5
Other MSA	—	—	—	—	—	—	—	—	—	—	—	3.3	4.3	2.5	2.8	—	—	4.2	3.0	3.6	3.2	1.9	3.3	2.4	3.1	3.7	2.6	-1.1
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	7.8	8.5	8.9	4.6	—	—	6.5	5.2	6.7	5.8	6.7	7.7	7.6	4.9	5.3	5.0	-0.3
Parental Education:[b]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	1.9	5.6	5.3	1.8	—	—	6.7	3.9	6.6	2.7	2.2	1.3	2.2	2.1	2.9	4.0	+1.2
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	7.6	6.9	3.2	3.9	—	—	4.8	3.5	3.8	4.7	3.6	5.8	5.2	3.7	4.2	3.2	-1.0
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	3.5	4.7	5.4	3.1	—	—	5.2	3.3	3.3	2.9	3.6	3.7	2.6	3.5	3.9	2.8	-1.1
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	3.9	5.0	4.7	4.6	—	—	2.4	3.7	3.9	3.5	4.6	3.9	3.0	1.9	2.1	2.7	+0.6
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	3.3	2.1	3.5	1.2	—	—	2.6	1.8	2.7	2.7	1.1	5.0	2.5	2.1	2.5	2.5	0.0
Race (2-year average):[c]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	5.8	5.4	4.5	—	—	—	4.8	4.7	4.6	4.1	5.0	5.2	4.3	4.3	4.4	+0.1
Black	—	—	—	—	—	—	—	—	—	—	—	—	0.6	1.0	0.5	—	—	—	0.3	0.7	0.6	0.3	0.2	0.0	0.0	0.1	0.2	+0.1
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	0.8	2.1	2.1	—	—	—	1.6	0.7	1.2	2.2	1.9	0.8	0.4	0.9	0.6	-0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases. See Appendix B for definition of variables in table.
Data based on one of six forms; N is one-sixth of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

CAUTION: Limited sample sizes (see "Notes" above). Use caution in interpreting subgroup trends.

[a] Prevalence of smokeless tobacco use was not asked of twelfth graders in 1990 and 1991. Prior to 1990 the prevalence of use question on smokeless tobacco was located near the end of one twelfth-grade questionnaire form, whereas after 1991 the question was placed earlier and in a different form. This shift could explain the discontinuities between the corresponding data.

[b] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[c] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-56
Steroids: Trends in Annual Prevalence of Use by Subgroups for Eighth and Tenth Graders

Percentage who used in last twelve months

	8th Grade												10th Grade											
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	'00–'01 change
Approx. N =	*17500*	*18600*	*18300*	*17300*	*17500*	*17800*	*18600*	*18100*	*16700*	*16700*	*16200*		*14800*	*14800*	*15300*	*15800*	*17000*	*15600*	*15500*	*15000*	*13600*	*14300*	*14000*	
Total	1.0	1.1	0.9	1.2	1.0	0.9	1.0	1.2	1.7	1.7	1.6	0.0	1.1	1.1	1.0	1.1	1.2	1.2	1.2	1.2	1.7	2.2	2.1	-0.1
Gender:																								
Male	1.8	1.7	1.4	1.8	1.3	1.1	1.3	1.6	2.5	2.2	2.3	+0.1	1.9	1.9	1.7	1.9	2.0	1.7	1.8	1.9	2.8	3.6	3.3	-0.3
Female	0.3	0.5	0.3	0.6	0.8	0.7	0.7	0.7	0.9	1.0	1.0	0.0	0.3	0.3	0.3	0.4	0.5	0.6	0.6	0.6	0.7	0.8	1.0	+0.2
College Plans:																								
None or under 4 yrs.	2.2	2.4	2.2	2.5	2.2	1.5	2.4	2.8	4.0	3.6	3.1	-0.5	1.7	1.3	1.9	2.1	2.1	2.1	2.4	1.9	2.6	3.6	3.2	-0.5
Complete 4 yrs.	0.8	0.9	0.7	1.0	0.9	0.8	0.8	1.0	1.4	1.5	1.5	0.0	0.9	1.0	0.8	0.9	1.1	1.0	1.0	1.1	1.6	1.9	1.9	0.0
Region:																								
Northeast	0.7	1.1	0.6	1.0	1.0	1.1	1.0	1.1	1.6	1.7	1.8	+0.2	1.2	0.9	1.0	1.0	1.1	1.0	0.9	1.4	2.0	1.8	1.9	+0.2
North Central	1.1	1.2	1.0	1.0	1.1	0.8	1.0	1.2	1.6	1.8	1.7	0.0	1.0	1.1	1.2	1.1	1.2	1.4	1.2	1.1	1.8	2.1	1.5	-0.6
South	1.2	1.1	1.0	1.6	1.1	0.9	0.9	1.4	1.9	1.8	1.9	+0.1	1.0	1.2	1.0	1.3	1.3	1.4	1.4	1.4	1.7	2.5	2.5	0.0
West	0.7	0.9	0.7	1.0	1.0	0.8	1.1	0.9	1.4	1.3	0.9	-0.4	1.0	1.2	0.8	1.1	1.3	0.6	1.3	0.9	1.4	2.1	2.3	+0.2
Population Density:																								
Large MSA	0.8	1.0	0.8	0.9	0.9	0.8	0.9	1.0	1.3	1.6	1.6	0.0	1.5	0.9	0.8	0.8	0.8	0.8	1.0	0.8	1.2	2.3	1.9	-0.4
Other MSA	1.2	1.2	0.9	1.2	1.2	0.9	0.9	1.2	1.9	1.5	1.7	+0.1	1.0	1.0	0.9	1.1	1.4	1.2	1.2	1.3	1.9	2.0	2.0	0.0
Non-MSA	1.0	0.9	0.9	1.5	0.9	0.9	1.2	1.4	1.7	2.0	1.6	-0.4	0.8	1.4	1.4	1.5	1.4	1.5	1.5	1.5	2.0	2.5	2.4	-0.1
Parental Education:[a]																								
1.0-2.0 (Low)	1.8	1.2	1.2	1.6	1.3	0.9	1.4	1.7	2.2	2.5	2.0	-0.5	0.7	0.9	1.5	1.8	1.2	1.7	1.7	1.3	1.2	2.3	1.6	-0.7
2.5-3.0	1.1	1.2	0.8	1.6	1.3	0.7	0.9	1.1	1.9	2.1	1.6	-0.5	1.3	1.1	1.0	0.9	1.1	0.7	1.1	1.1	1.7	2.2	2.1	0.0
3.5-4.0	1.0	1.0	1.1	1.3	0.8	0.9	1.2	1.4	1.6	1.3	1.9	+0.6	1.0	1.2	1.1	0.8	1.6	1.2	1.4	1.7	2.0	2.0	2.3	+0.3
4.5-5.0	0.7	0.9	0.8	0.8	0.8	1.2	0.9	1.1	1.4	1.6	1.5	-0.2	0.9	1.0	0.8	1.4	1.1	1.2	1.0	0.9	1.5	2.4	2.0	-0.5
5.5-6.0 (High)	1.0	1.3	0.6	0.9	1.5	0.9	1.2	1.1	2.0	1.6	1.7	+0.1	1.2	1.4	1.1	1.1	1.0	1.1	1.1	1.1	2.4	2.2	2.1	-0.1
Race (2-year average):[b]																								
White	—	1.1	1.0	1.0	1.1	0.9	0.9	1.1	1.5	1.9	1.8	-0.1	—	1.0	1.0	1.0	1.2	1.3	1.3	1.3	1.5	2.1	2.3	+0.2
Black	—	0.7	0.6	0.8	0.9	0.7	0.6	0.7	0.8	0.7	0.8	+0.1	—	0.7	0.8	0.8	0.7	0.7	0.5	0.5	0.7	1.2	1.6	+0.4
Hispanic	—	1.2	1.1	1.1	1.3	1.5	1.4	1.4	1.8	1.8	1.5	-0.3	—	1.2	1.4	1.3	0.9	1.1	1.2	1.2	1.5	1.8	2.1	+0.2

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-58 for the number of subgroup cases.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-57
Steroids: Trends in Annual Prevalence of Use by Subgroups for Twelfth Graders

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
	Percentage who used in last twelve months																											
Approx. N =	*9400*	*1540*	*1710*	*1780*	*1550*	*1590*	*1750*	*1770*	*1630*	*1590*	*1600*	*1520*	*1630*	*1630*	*1670*	*1520*	*1500*	*1580*	*1630*	*1540*	*1540*	*1430*	*1540*	*1520*	*1360*	*1280*	*1280*	
Total	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	1.7	1.4	1.1	1.2	1.3	1.5	1.4	1.4	1.7	1.8	1.7	2.4	+0.7s
Gender:																												
Male	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.8	2.6	2.4	2.1	2.5	2.1	2.4	2.2	2.5	2.8	3.1	2.5	3.8	+1.3s
Female	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.9	0.3	0.2	0.1	0.1	0.5	0.6	0.4	0.5	0.3	0.6	0.9	1.1	+0.2
College Plans:																												
None or under 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	2.2	2.1	2.1	2.0	1.9	2.0	2.3	2.3	2.1	3.6	2.0	4.6	+2.5s
Complete 4 years	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.3	1.2	0.8	0.9	1.1	1.2	1.1	1.2	1.4	1.3	1.6	1.8	+0.2
Region:																												
Northeast	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.0	1.3	1.2	0.6	1.5	1.5	1.6	1.3	2.1	0.9	1.3	1.9	4.5	+2.6ss
North Central	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.5	1.3	1.4	1.4	0.8	2.2	1.5	2.1	2.1	2.3	1.6	2.3	1.7	-0.7
South	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	2.2	1.7	0.6	1.6	1.0	1.7	1.3	0.5	1.6	2.6	1.5	2.1	+0.6
West	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	1.7	1.0	2.3	1.1	0.8	1.0	0.3	1.6	1.7	1.2	1.1	2.1	+1.0
Population Density:																												
Large MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.3	1.1	1.0	0.7	1.1	1.4	1.3	0.8	2.1	1.3	1.7	1.9	+0.2
Other MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	1.5	1.4	1.4	0.9	1.5	1.3	1.3	1.7	1.5	2.0	2.0	2.9	+1.0
Non-MSA	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.1	2.4	1.6	0.8	2.2	1.3	2.1	1.5	1.6	1.6	1.9	1.2	2.0	+0.8
Parental Education:[a]																												
(Low) 1.0-2.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	0.6	1.1	2.0	2.1	1.1	2.8	1.1	1.5	3.4	3.0	1.5	1.3	2.1	+0.7
2.5-3.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	2.0	0.6	0.9	1.3	1.7	1.3	1.9	1.4	1.4	0.8	1.6	3.2	+1.6s
3.5-4.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.6	2.3	1.6	1.3	1.5	1.1	1.1	1.3	1.1	1.1	2.5	1.9	1.9	0.0
4.5-5.0	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.3	1.1	1.6	0.9	1.3	0.6	2.0	1.1	1.2	1.9	2.2	1.4	1.9	+0.6
5.5-6.0 (High)	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.1	1.0	0.5	0.8	0.8	1.2	1.4	1.1	1.3	1.5	1.1	2.4	2.2	-0.2
Race (2-year average):[b]																												
White	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.6	1.3	1.3	1.2	1.1	1.4	1.3	1.2	1.5	1.7	1.8	2.1	+0.3
Black	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.8	1.2	0.5	1.1	1.8	1.2	1.4	1.5	0.9	0.7	1.0	1.2	+0.3
Hispanic	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	2.3	3.3	1.8	0.9	1.7	1.3	0.6	1.6	2.4	2.9	2.4	2.1	-0.3

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001. '—' indicates data not available.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.
See Table D-59 for the number of subgroup cases.
See Appendix B for definition of variables in table.
Data based on one of six forms in 1989–90; N is one-sixth of N indicated in Table D-59. Data based on two of six forms beginning in 1991; N is two-sixths of N indicated in Table D-59.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] Parental education is an average score of mother's education and father's education. See Appendix B for details.

[b] To derive percentages for each racial subgroup, data for the specified year *and* the previous year have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-58
Approximate Weighted Ns by Subgroups for Eighth and Tenth Graders

	8th Grade											10th Grade										
	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001
Total	17,500	18,600	18,300	17,300	17,500	17,800	18,600	18,100	16,700	16,700	16,200	14,800	14,800	15,300	15,800	17,000	15,600	15,500	15,000	13,600	14,300	14,000
Gender:																						
Male	8,600	8,800	8,600	8,300	8,100	8,400	8,600	8,600	7,800	7,900	7,500	7,200	7,000	7,300	7,700	8,300	7,500	7,400	7,100	6,300	6,800	6,600
Female	8,600	9,300	9,200	8,600	8,700	8,800	9,300	8,900	8,400	8,300	8,300	7,400	7,400	7,800	7,900	8,400	7,800	7,800	7,700	7,000	7,200	7,100
College Plans:																						
None or under 4 yrs.	2,300	2,400	2,100	2,000	1,900	2,200	1,900	1,800	1,700	1,600	1,600	2,600	2,400	2,500	2,700	2,500	2,300	2,200	2,200	1,900	1,900	1,900
Complete 4 yrs.	14,600	15,400	15,400	14,700	14,800	14,800	15,800	15,600	14,500	14,500	14,100	11,900	12,000	12,400	12,800	14,200	13,000	13,000	12,500	11,500	12,100	11,900
Region:																						
Northeast	3,000	3,700	3,900	3,400	3,100	3,200	3,400	3,300	3,000	2,800	2,900	2,700	3,000	2,900	3,100	3,300	3,100	3,300	3,100	3,000	2,800	2,700
North Central	5,300	5,300	4,700	4,200	4,300	4,600	4,100	4,300	4,200	4,300	4,000	3,700	3,800	4,800	4,700	4,400	3,900	3,900	3,600	3,100	3,700	4,100
South	6,300	6,200	6,400	6,300	6,600	6,300	7,200	6,600	6,100	6,300	5,900	4,900	5,000	4,900	5,200	6,100	5,600	5,500	5,200	4,700	5,000	5,000
West	2,900	3,400	3,300	3,400	3,500	3,700	3,900	3,900	3,400	3,300	3,400	3,500	3,000	2,700	2,800	3,200	3,000	2,800	3,100	2,800	2,800	2,200
Population Density:																						
Large MSA	4,500	5,700	5,500	4,400	5,200	5,200	5,000	4,800	4,800	4,900	4,700	3,400	3,700	3,500	4,100	4,700	4,300	4,300	4,300	3,700	4,000	3,900
Other MSA	8,400	8,300	8,800	8,300	7,800	8,400	9,000	8,800	7,900	7,900	7,500	7,400	7,300	7,600	7,500	8,200	7,500	7,300	7,000	6,700	6,700	6,700
Non-MSA	4,600	4,600	4,000	4,600	4,500	4,200	4,600	4,500	4,000	3,900	4,000	4,000	3,800	4,200	4,200	4,100	3,800	3,900	3,700	3,200	3,600	3,400
Parental Education:																						
1.0-2.0 (Low)	1,400	1,700	1,700	1,600	1,500	1,500	1,500	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,300	1,200	1,100	1,300	1,300	1,100	1,200	1,200
2.5-3.0	4,400	4,600	4,500	4,100	3,900	4,300	4,000	3,900	3,800	3,700	3,400	3,900	3,900	4,100	4,100	4,100	3,600	3,700	3,700	3,200	3,200	3,200
3.5-4.0	4,100	4,300	4,300	4,200	4,000	4,100	4,300	4,100	3,800	3,900	4,000	3,900	3,900	4,100	4,300	4,600	4,300	4,100	4,000	3,600	3,700	3,700
4.5-5.0	4,100	4,100	4,100	3,900	3,900	3,900	4,500	4,500	4,000	3,900	3,900	3,500	3,400	3,500	3,700	4,000	3,900	3,700	3,500	3,300	3,500	3,400
5.5-6.0 (High)	2,200	2,300	2,300	2,200	2,300	2,200	2,600	2,700	2,200	2,200	2,100	1,800	1,700	1,700	1,800	2,300	1,900	1,900	1,800	1,700	1,900	1,800
Race (2-year average):*																						
White	—	21,900	22,000	20,900	19,800	20,200	21,400	21,300	19,800	18,900	18,600	—	19,600	20,700	22,000	22,900	22,400	20,900	19,800	18,400	18,200	18,600
Black	—	4,200	4,800	5,500	5,600	5,300	4,700	4,900	5,000	4,800	4,500	—	3,900	3,600	3,300	3,300	3,100	3,200	3,600	3,600	3,100	2,800
Hispanic	—	3,400	3,600	4,000	4,000	4,000	4,200	4,100	4,100	4,000	4,100	—	2,600	2,700	2,800	2,900	3,000	3,200	3,500	3,200	3,100	3,400

NOTES: '—' indicates data not available.
See Appendix B for definition of variables in table.
SOURCE: The Monitoring the Future Study, the University of Michigan.
CAUTION: The Ns in this table are based on the entire sample at each grade level. Some drug-use questions are asked only in some of the questionnaire forms rather than in all, in which case these Ns need to be adjusted appropriately. Look under "Notes" in each table to see if only a fraction of the sample was asked about that drug. If there is no such indication, that means the entire sample received the question.

*Ns for each racial subgroup represent the combination of the specified year *and* the previous year. Data have been combined to increase subgroup sample sizes and thus provide more stable estimates.

TABLE D-59
Approximate Weighted Ns by Subgroups for Twelfth Graders

	Class of 1975	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988
Total	9,400	15,400	17,100	17,800	15,500	15,900	17,500	17,700	16,300	15,900	16,000	15,200	16,300	16,300
Gender:														
Male	4,300	6,900	7,100	8,500	7,500	7,500	8,400	8,500	7,800	7,600	7,600	7,100	7,700	7,700
Female	5,200	7,000	7,600	9,000	8,000	7,800	8,600	8,600	8,000	7,800	8,000	7,700	8,200	8,200
College Plans:														
None or uder 4 years	—	6,500	6,700	8,100	6,800	6,300	6,700	7,200	6,300	5,900	5,600	5,100	5,000	4,700
Complete 4 years	—	6,800	7,200	8,600	8,000	8,500	9,700	9,200	8,800	8,900	9,300	9,100	10,300	10,600
Region:														
Northeast	2,200	3,400	3,700	4,400	3,800	3,600	4,100	4,600	3,900	3,200	3,700	3,600	3,500	3,200
North Central	2,900	4,500	4,600	5,200	4,800	4,700	5,300	5,200	4,600	4,500	4,400	4,300	4,400	4,300
South	3,000	4,300	4,600	6,000	4,800	4,800	5,300	5,300	5,200	5,300	4,900	4,700	5,200	5,600
West	1,400	2,200	2,200	2,500	2,600	2,700	2,800	2,600	2,600	2,900	3,000	2,600	3,200	3,200
Population Density:														
Large MSA	2,100	3,700	4,000	4,600	4,000	3,900	4,500	4,800	4,200	4,100	4,200	3,700	4,200	4,400
Other MSA	4,000	5,700	6,200	8,000	6,800	6,700	7,100	7,300	6,800	6,900	6,900	7,000	8,000	7,700
Non-MSA	3,400	5,000	4,900	5,500	5,200	5,200	5,900	5,600	5,300	4,900	4,900	4,500	4,100	4,200
Parental Education:														
1.0-2.0 (Low)	1,700	2,200	2,600	3,100	2,500	2,300	2,400	2,700	2,200	1,900	1,800	1,800	1,700	1,600
2.5-3.0	3,000	4,300	5,400	6,200	5,600	5,300	5,800	5,900	5,500	5,100	5,100	4,600	4,500	4,500
3.5-4.0	1,600	2,500	3,200	4,000	3,600	3,600	4,200	4,200	3,900	4,000	4,000	3,800	4,300	4,400
4.5-5.0	1,100	1,600	2,200	2,800	2,600	2,700	3,100	2,900	2,800	2,900	3,000	2,900	3,400	3,500
5.5-6.0 (High)	440	710	1,100	1,200	1,200	1,300	1,500	1,300	1,200	1,400	1,500	1,500	1,800	1,900
Race (2-year average):[a]														
White	—	—	23,400	26,500	27,500	25,600	26,300	27,300	26,200	24,700	24,200	23,600	23,800	24,200
Black	—	—	3,300	3,700	3,500	3,500	4,000	4,000	3,900	4,000	4,000	3,500	3,200	3,600
Hispanic	—	—	890	1,000	940	740	930	1,300	1,300	1,200	1,200	1,500	1,900	2,100

NOTES: '—' indicates data not available.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

CAUTION: The Ns in this table are based on the entire twelfth-grade sample. Some drug-use questions are asked only in some of the questionnaire forms rather than in all, in which case these Ns need to be adjusted appropriately. Look under "Notes" in each table to see if only a fraction of the sample was asked about that drug. If there is no such indication, that means the entire sample received the question.

[a] Ns for each racial subgroup represent the combination of the specified year *and* the previous year. Data have been combined to increase subgroup sample sizes and thus provide more stable estimates.

(Table continued on next page)

TABLE D-59 (cont.)
Approximate Weighted Ns by Subgroups for Twelfth Graders

	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001
Total	16,700	15,200	15,000	15,800	16,300	15,400	15,400	14,300	15,400	15,200	13,600	12,800	12,800
Gender:													
Male	8,000	7,700	7,400	7,400	7,500	6,900	7,200	6,700	7,100	7,100	6,300	5,800	5,800
Female	8,300	7,100	7,200	7,900	8,200	8,000	7,800	7,100	7,700	7,500	6,700	6,400	6,500
College Plans:													
None or under 4 years	4,800	4,200	4,000	3,700	3,700	3,400	3,300	2,600	3,200	3,100	2,800	2,600	2,500
Complete 4 years	11,000	10,100	10,300	11,200	11,600	11,100	11,200	10,800	11,000	11,100	10,200	9,300	9,600
Region:													
Northeast	3,200	3,300	2,800	2,800	2,700	2,700	2,800	3,000	3,300	2,800	2,500	2,500	2,400
North Central	4,500	4,200	4,000	4,400	4,600	4,000	4,300	3,800	4,100	3,800	3,600	3,100	3,700
South	6,100	5,000	5,100	5,600	5,800	5,700	5,400	5,100	5,300	5,700	4,900	4,500	4,100
West	2,900	2,700	3,100	3,000	3,200	3,000	2,900	2,400	2,700	2,900	2,600	2,700	2,600
Population Density:													
Large MSA	4,000	3,800	3,600	3,600	3,700	4,300	4,400	3,400	4,100	4,300	3,800	3,800	3,800
Other MSA	8,800	7,700	7,200	8,200	7,800	7,100	7,000	7,000	7,500	7,500	6,200	5,800	5,800
Non-MSA	3,900	3,700	4,200	4,000	4,800	4,000	4,000	3,900	3,800	3,400	3,600	3,200	3,200
Parental Education:													
1.0-2.0 (Low)	1,700	1,600	1,500	1,400	1,600	1,400	1,200	1,100	1,300	1,200	960	860	1,000
2.5-3.0	4,600	4,300	4,100	4,100	4,300	3,700	3,700	3,300	3,600	3,700	3,200	3,000	2,900
3.5-4.0	4,500	4,100	4,200	4,600	4,500	4,300	4,400	3,800	4,100	4,300	3,900	3,600	3,600
4.5-5.0	3,500	3,100	3,100	3,400	3,600	3,500	3,700	3,500	3,500	3,300	3,200	3,100	3,200
5.5-6.0 (High)	1,700	1,600	1,500	1,700	1,700	1,800	1,800	2,100	2,100	2,000	1,800	1,600	1,600
Race (2-year average):[a]													
White	24,000	23,400	21,900	21,500	22,000	21,800	21,600	20,700	19,800	20,200	19,500	17,700	16,200
Black	3,900	3,500	3,200	3,900	4,200	3,600	3,300	3,200	3,600	3,700	3,400	3,300	3,100
Hispanic	2,400	2,500	2,400	2,600	2,900	3,100	2,700	2,600	2,800	3,000	2,500	2,200	2,600

NOTES: '—' indicates data not available.
See Appendix B for definition of variables in table.

SOURCE: The Monitoring the Future Study, the University of Michigan.

CAUTION: The Ns in this table are based on the entire twelfth-grade sample. Some drug-use questions are asked only in some of the questionnaire forms rather than in all, in which case these Ns need to be adjusted appropriately. Look under "Notes" in each table to see if only a fraction of the sample was asked about that drug. If there is no such indication, that means the entire sample received the question.

[a] Ns for each racial subgroup represent the combination of the specified year *and* the previous year. Data have been combined to increase subgroup sample sizes and thus provide more stable estimates.

Appendix E

TRENDS IN SPECIFIC SUBCLASSES OF HALLUCINOGENS, AMPHETAMINES, TRANQUILIZERS, AND NARCOTICS OTHER THAN HEROIN

In one of the six questionnaire forms administered to twelfth graders, respondents who answer that they used ***amphetamines*** in the prior 12 months are then asked a small set of additional questions about that use. One of those questions asks, "Which amphetamines have you taken in the last year without a doctor's orders? (Mark all that apply.)" A pre-specified list of different types of amphetamines (e.g., Benzedrine, Dexadrine, ritalin, etc.) is provided, along with a category labeled, "Other" and one labeled, "Don't know the name of some amphetamines I have used." Parallel questions are included in the same twelfth-grade questionnaire form for three other classes of drugs: ***hallucinogens other than LSD***, ***tranquilizers***, and ***narcotics other than heroin***.

The answers to these four question sets are provided here, covering the 25 year interval from 1976 to 2001. Because these questions are contained in only one of the six twelfth-grade questionnaire forms (one of five in earlier years), the number of cases on which the estimates are based is lower than most of the prevalence estimates contained elsewhere in this volume. The relevant numbers of cases are provided in the bottom rows of each table.

We provide one other caution to the reader in interpreting these results. For some of these drug classes the absolute prevalence rates may be underestimates of the true rates, simply because some users of a particular subclass may not realize that the substance (e.g., peyote) actually is a subclass of the more general class (in this case, "hallucinogens other than LSD"), even though peyote is listed as one of the "other hallucinogenic" drugs in the introduction to the question set. Such respondents, therefore, may not indicate use on the general question (about hallucinogens other than LSD), which means they would never get to the question about using the subclass drug (peyote). As a result, they would not be counted among the users.

In the twelfth-grade questionnaire form we go to some length to state both the full list of common street names, as well as the proper names, for the drugs in the general class *before* asking about use of the general class of drugs. However, because two of the drugs in the subclass lists (PCP and crystal methamphetamine) also have been included on a different questionnaire form in recent years as a general class (without branching), we have been able to determine that they show higher prevalence rates when not treated as a subclass. For example, the 2001 annual prevalence rate for PCP generated by a general question about PCP use asked of all seniors was 1.8%, whereas the rate generated when the drug was treated as a subcategory of hallucinogens other than LSD was only 0.9%. This is likely an extreme case, however, because proper classification of PCP is quite ambiguous—it actually is an animal tranquilizer with hallucinogenic effects. (In fact, it was our suspicion that students were not categorizing PCP as "hallucinogens other than

LSD,"even though it was given in the list of examples for that question. That suspicion led us to ask separate questions about its use.)

Despite the fact that the questions about subclasses of drugs may underestimate the *prevalence* of use to some degree, we think they still are helpful for discerning long-term trends. To stick with the PCP example, which may be the worst case, both the general questions about PCP use and the question that treats PCP as a subcategory of hallucinogens other than LSD have shown very similar trends since 1979, when both were first available for comparison. Both measures showed a substantial decline in PCP use from 1979 through the mid-1980s, followed by a period of stability in use at low levels, then followed by a modest increase in use in the 1990s until 1996, when use leveled. (In 2001 both measures showed some decline.) Thus if we had only the results from the subcategory question available, we would have obtained quite an accurate picture of the trend story, even though we would have been underestimating the absolute prevalence rate to some degree.

We conclude that the data for the other specific drug classes also should provide a fair approximation of the trend stories. Most such prevalence data probably underestimate the true rates, however.

NOTE ON HALLUCINOGENS: In 2001, we changed the question wording in the general question about use of hallucinogens other than LSD, replacing the older term *psychedelics* with the now more familiar word *hallucinogens*; and, perhaps more important, the term *shrooms* was added to the list of examples. (*Shrooms* is the street name that has come into favor in recent years for hallucinogenic mushrooms.) We believe that this methodological change had the effect of increasing prevalence rates in both the general category and in some of the specific drugs within it. Therefore, no change scores between 2000 and 2001 are provided in Table E-1 for the various classes of hallucinogens other than LSD, lest the results of this methodological artifact be mistaken for a real change in use.

Ritalin has been one of the specific drugs listed under the general class of amphetamines. It is an indicated treatment for attention-deficit hyperactivity disorder and has received increasing attention in recent years. For that reason, we added a separate "tripwire" question about its use in the 2001 survey.[97] As with PCP, we find that the prevalence reported in response to a stand-alone question is higher than that reported under a branching question. Annual prevalence in 2001 among twelfth graders was 5.1% with the new question, compared to 2.4% with the branching question.

Based on the new question, half of those users (2.5% of all seniors) reported using ritalin only once or twice in the prior year, while 1.3% reported using it ten or more times during the year. We think it likely that the trend results based on the branching question tell a reasonably accurate story about the pattern of change for ritalin use, despite the difference in the absolute prevalence rate.

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[97] A tripwire question is one that, for reasons of space economy, asks only about frequency of use in the prior twelve months.

TABLE E-1

Specific Hallucinogens Other Than LSD: Trends in Annual Prevalence of Use for All Seniors

What psychedelics/ hallucinogens[a] other than LSD have you taken during the last year?	Percentage of ALL SENIORS using drug indicated in past year																										
	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Mescaline	5.1	5.0	5.0	4.1	4.8	3.7	3.5	2.7	3.0	2.3	2.1	1.6	0.8	0.9	0.6	0.6	0.6	0.8	0.5	1.1	1.2	0.8	1.3	0.9	1.3	0.9	—
Peyote	1.8	1.4	1.5	1.1	1.1	0.9	0.6	0.6	0.6	0.5	0.4	0.5	0.3	0.4	0.9	0.1	0.5	0.6	0.6	0.7	0.9	0.8	0.6	0.8	0.2	0.9	—
Psilocybin	1.7	1.0	1.3	1.0	1.5	1.6	0.9	0.7	0.7	0.6	0.9	0.6	0.9	0.3	0.7	0.3	0.2	0.5	0.5	0.9	1.4	1.1	1.4	1.2	1.4	4.9	—
PCP	2.9	3.3	4.5	4.2	3.5	2.2	1.4	1.5	1.2	0.9	0.8	1.0	0.6	0.4	0.8	0.5	0.6	0.7	0.9	1.2	1.1	0.9	0.8	1.1	1.2	0.9	—
Concentrated THC	5.6	5.7	5.3	4.6	2.6	2.1	1.5	1.4	0.9	1.1	0.8	1.0	0.7	0.4	0.4	0.4	0.2	0.5	0.4	0.9	1.5	1.2	1.1	1.3	0.9	1.3	—
Other	3.3	3.7	3.4	3.9	2.9	2.7	1.9	1.5	1.5	1.3	0.9	0.9	0.7	0.9	0.9	0.6	1.0	0.8	0.7	1.3	1.8	1.9	2.2	1.9	2.4	1.6	—
Don't know the names of some I have used	1.2	1.3	1.5	1.6	1.2	1.2	1.1	1.2	0.9	1.0	0.7	0.7	0.5	0.3	0.5	0.4	0.3	0.4	0.6	0.8	0.8	1.2	1.2	1.0	0.8	0.9	—
Approx. Wtd. N =	*2800*	*3000*	*3500*	*3100*	*3100*	*3400*	*3500*	*3200*	*3100*	*3100*	*3000*	*3200*	*3200*	*2700*	*2500*	*2500*	*2600*	*2600*	*2500*	*2500*	*2300*	*2500*	*2500*	*2200*	*2074*	*2053*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 2001, the question asking about the prevalence of use of specific hallucinogens other than LSD was changed in several ways: (1) the wording of the screening question was changed from "psychedelics other than LSD" to "hallucinogens other than LSD"; (2) in the list of examples given in the screening question, "psilocybin" was expanded to "shrooms or psilocybin"; and (3) the specific question about "psilocybin" was expanded to "shrooms or psilocybin." The inclusion of the term "shrooms" elicited a higher reported level of use in response to both the general category and the specific drug psilocybin. This question change likely explains some of the discontinuity in the 2000–2001 results, so change scores are not presented here lest they be misinterpreted as reflecting real changes in the prevalence of use.

TABLE E-2

Specific Amphetamines: Trends in Annual Prevalence of Use for All Seniors

What amphetamines have you taken during the last year without a doctor's orders?	Percentage of ALL SENIORS using drug indicated in past year																										
	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Benzedrine	3.5	4.1	3.7	3.1	3.2	3.6	2.9	1.6	1.7	1.9	1.4	1.1	0.5	0.7	0.6	0.1	0.2	0.3	0.6	0.2	0.3	0.2	0.3	0.3	0.2	0.3	+0.2
Dexedrine	2.9	3.5	3.7	4.0	4.0	5.1	2.8	1.4	1.6	1.2	0.9	0.6	0.4	0.6	0.5	0.3	0.2	0.2	0.5	0.4	0.3	0.9	0.6	0.6	0.6	0.8	+0.2
Methedrine	3.4	4.2	3.9	4.7	4.4	5.6	4.7	3.2	3.0	2.9	2.0	1.5	1.2	0.7	0.5	0.3	0.4	0.4	0.5	0.3	0.3	0.5	0.3	0.3	0.3	0.5	+0.2
Ritalin	0.5	0.7	0.6	0.4	0.6	0.7	0.5	0.3	0.3	0.4	0.3	0.3	0.3	0.4	0.5	0.1	0.1	0.4	1.0	0.8	1.2	2.8	2.8	2.4	2.2	2.4	+0.2
Preludin	0.6	1.0	1.1	1.3	1.1	1.7	0.8	0.6	0.5	0.4	0.3	0.1	0.2	0.3	0.1	0.1	0.1	0.1	0.3	0.1	0.5	0.2	0.3	0.2	*	0.2	+0.2
Dexamyl	1.3	1.5	1.1	1.3	1.3	1.1	1.2	0.6	0.9	0.6	0.8	0.5	0.4	0.3	0.2	0.1	0.2	0.3	0.5	0.2	0.4	0.3	0.4	0.2	0.2	0.5	+0.3
Methamphetamine	1.9	2.3	2.3	2.4	2.7	3.7	2.8	1.8	2.1	2.0	1.5	1.3	1.2	0.6	0.6	0.8	0.4	0.6	0.6	0.7	0.7	1.1	1.3	0.9	0.9	1.5	+0.5
Crystal meth. (Ice)	—	—	—	—	—	—	—	—	—	—	—	—	—	1.2	0.8	1.2	1.1	1.1	1.4	1.6	1.5	1.8	2.5	1.8	1.9	2.1	+0.2
Other	4.6	5.9	6.5	6.4	6.4	7.6	4.6	4.2	4.3	3.3	3.7	2.6	1.5	2.1	1.6	1.2	1.5	2.0	2.3	2.0	2.3	2.5	3.1	2.6	2.9	2.7	-0.2
Don't know the names of some amphetamines I have used	6.8	7.2	6.8	7.5	8.7	11.1	9.2	8.4	8.1	7.0	5.3	4.4	3.3	2.9	2.9	2.3	1.9	2.2	2.1	2.6	2.3	2.8	3.1	2.5	2.1	2.2	+0.1
Approx. Wtd. N =	*2700*	*2900*	*3400*	*3100*	*3000*	*3400*	*3400*	*3200*	*3100*	*3100*	*3000*	*3200*	*3200*	*2700*	*2500*	*2500*	*2600*	*2600*	*2500*	*2500*	*2300*	*2500*	*2500*	*2200*	*2055*	*2049*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01., sss = .001.
'—' indicates data not available.
'*' indicates less than .05 percent but greater than 0 percent.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE E-3
Specific Tranquilizers: Trends in Annual Prevalence of Use for All Seniors

What tranquilizers have you taken during the last year without a doctor's orders?	Percentage of ALL SENIORS using drug indicated in past year																									
	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Librium	2.6	2.9	2.4	2.1	1.8	2.0	0.9	1.2	0.5	0.8	0.7	0.7	0.3	0.2	0.2	0.2	0.1	0.1	*	0.3	0.3	0.2	0.3	0.4	0.2	0.4	+0.1
Valium	5.3	6.9	6.0	5.9	5.3	5.5	3.5	3.2	2.9	3.5	2.8	2.9	2.2	1.7	1.6	1.2	1.6	1.6	1.6	1.3	1.5	2.0	2.0	2.7	2.6	2.8	+0.2
Miltown[a]	0.2	0.3	0.1	0.3	0.1	0.2	0.1	0.1	0.1	0.1	0.0	0.1	0.0	0.1	0.1	0.0	*	0.0	0.0	0.0	0.1	*	*	0.2	0.1	—	—
Xanax	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	1.9	—
Equanil	0.4	0.4	0.7	0.4	0.4	0.2	0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.0	0.1	0.1	*	0.1	*	*	0.2	0.2	0.1	0.1	0.2	0.1	-0.2
Meprobamate	0.6	0.2	0.4	0.3	0.2	0.1	0.1	0.1	0.1	0.1	0.1	0.2	*	0.1	0.2	*	0.1	0.0	0.1	0.2	0.1	0.3	0.1	0.1	*	0.1	0.0
Serax	0.2	0.2	0.1	0.2	0.1	0.2	*	0.1	0.2	0.1	0.2	0.1	0.0	0.1	0.2	0.0	0.2	*	*	*	0.2	0.2	0.1	0.2	0.1	0.1	0.0
Atarax	0.2	0.1	0.1	0.2	0.1	0.3	0.1	0.1	0.1	0.2	0.2	0.2	*	*	0.1	0.1	0.1	0.1	0.0	*	*	0.1	0.0	0.1	0.2	0.1	-0.2
Tranxene	0.2	0.3	0.3	0.5	0.3	0.2	0.2	0.3	0.2	0.3	0.2	0.2	0.1	0.1	0.1	0.1	0.2	*	*	0.1	0.1	0.1	0.1	0.3	0.1	0.1	+0.1
Vistaril	0.1	0.2	0.4	0.3	0.3	0.3	0.1	0.1	0.2	0.4	0.2	0.1	0.0	*	0.3	0.0	*	*	0.1	0.1	0.1	0.2	0.1	0.1	0.1	0.3	+0.3
Don't know the names of some tranquilizers I have used	3.0	2.7	2.7	1.9	2.3	1.6	1.3	1.7	1.4	1.7	2.0	1.3	0.9	1.0	1.5	1.1	0.7	1.3	0.9	1.1	1.3	1.5	1.5	1.4	1.4	1.9	+0.4
Approx. Wtd. N =	*2700*	*2900*	*3400*	*3100*	*3000*	*3300*	*3400*	*3200*	*3100*	*3100*	*3000*	*3100*	*3200*	*2700*	*2500*	*2400*	*2600*	*2600*	*2500*	*2500*	*2300*	*2500*	*2500*	*2200*	*2046*	*2029*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
'—' indicates data not available.
'*' indicates less than .05 percent but greater than 0 percent.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

[a] In 2001 for the list of tranquilizers, Miltown was replaced with Xanax.

TABLE E-4

Specific Narcotics Other than Heroin: Trends in Annual Prevalence of Use for All Seniors

What narcotics other than heroin have you taken during the last year without a doctor's orders?	Percentage of ALL SENIORS using drug indicated in past year																									
	Class of 1976	Class of 1977	Class of 1978	Class of 1979	Class of 1980	Class of 1981	Class of 1982	Class of 1983	Class of 1984	Class of 1985	Class of 1986	Class of 1987	Class of 1988	Class of 1989	Class of 1990	Class of 1991	Class of 1992	Class of 1993	Class of 1994	Class of 1995	Class of 1996	Class of 1997	Class of 1998	Class of 1999	Class of 2000	Class of 2001	'00–'01 change
Methadone	0.6	0.4	0.9	0.9	0.8	0.7	0.4	0.6	0.5	0.5	0.5	0.3	0.1	*	0.5	*	0.3	0.2	0.1	0.1	*	0.4	0.3	0.8	0.7	0.7	0.0
Opium	2.7	2.4	2.6	3.0	2.8	2.4	1.6	1.2	1.5	1.4	1.5	1.3	0.9	0.9	0.7	0.8	0.5	0.4	0.6	1.0	1.1	1.8	2.0	1.7	2.1	2.1	0.0
Morphine	0.6	0.8	0.7	0.8	1.0	1.1	0.7	0.8	0.8	0.9	0.7	0.4	0.6	0.2	0.7	0.4	0.4	0.2	0.3	0.3	0.6	1.0	1.0	1.2	1.2	1.4	+0.2
Codeine	2.5	2.3	3.0	3.4	3.8	4.2	2.6	2.5	3.3	3.3	3.0	2.5	2.2	1.7	2.2	1.8	2.5	1.7	1.6	1.0	2.6	2.5	3.0	3.1	3.7	2.8	-0.9
Demerol	0.7	0.6	1.1	0.9	1.2	1.4	0.9	0.9	0.7	0.9	1.0	0.8	0.7	0.4	0.7	0.5	0.9	0.8	0.6	0.4	1.0	1.2	1.1	1.5	0.9	1.2	+0.4
Paregoric	0.4	0.3	0.3	0.2	0.4	0.2	0.1	0.3	0.1	0.1	0.1	0.1	*	0.1	0.1	0.1	0.2	0.0	*	0.1	*	0.0	0.0	*	0.0	0.1	+0.1
Talwin	0.1	0.1	0.1	0.2	0.3	0.1	0.3	0.2	0.3	0.1	0.1	0.1	*	*	0.1	0.0	0.0	0.0	0.1	0.0	0.0	0.0	0.1	*	0.0	0.1	+0.1
Laudanum	0.1	0.0	0.2	0.3	0.2	0.1	0.1	0.2	0.1	0.1	0.1	0.1	*	*	0.1	0.0	*	*	*	0.1	*	0.1	0.0	0.1	0.1	*	0.0
Other	0.5	0.5	1.4	0.8	0.7	0.6	0.5	0.6	0.4	0.6	0.5	0.4	0.4	0.5	0.5	0.2	0.5	0.3	0.6	0.3	0.7	0.6	1.2	1.6	1.4	0.9	-0.6
Don't know the names of some I have used	1.1	1.0	0.6	0.9	0.8	0.6	0.7	0.3	0.6	0.6	0.4	0.3	0.5	0.2	0.5	0.3	0.1	0.5	0.4	0.3	0.4	0.5	0.8	0.6	0.6	0.5	-0.1
Approx. Wtd. N =	*2700*	*2800*	*3400*	*3000*	*3000*	*3300*	*3400*	*3100*	*3000*	*3100*	*2900*	*3100*	*3100*	*2600*	*2500*	*2400*	*2500*	*2600*	*2500*	*2400*	*2300*	*2400*	*2400*	*2200*	*1994*	*1998*	

NOTES: Level of significance of difference between the two most recent classes: s = .05, ss = .01, sss = .001.
'*' indicates less than .05 percent but greater than 0 percent.
Any apparent inconsistency between the change estimate and the prevalence of use estimates for the two most recent classes is due to rounding error.

SOURCE: The Monitoring the Future Study, the University of Michigan.

TABLE E-5

Annual Prevalence of Use of Ritalin by Subgroups Eighth, Tenth, and Twelfth Graders, 2001

(Entries are percentages)

	Approx. N			Ritalin		
Grade:	8th	10th	12th	8th	10th	12th
Total	*5,400*	*4,700*	*4,300*	2.9	4.8	5.1
Gender:						
Male	*2,500*	*2,200*	*1,900*	3.2	5.2	6.0
Female	*2,800*	*2,400*	*2,200*	2.6	4.3	4.1
College Plans:						
None or under 4 yrs.	*530*	*630*	*830*	8.1	7.2	6.4
Complete 4 yrs.	*4,700*	*4,000*	*3,200*	2.4	4.3	4.7
Region:						
Northeast	*1,000*	*900*	*800*	1.5	5.5	4.7
North Central	*1,300*	*1,400*	*1,200*	3.0	4.6	7.4
South	*2,000*	*1,700*	*1,400*	3.5	5.3	4.1
West	*1,100*	*700*	*900*	2.9	3.1	3.8
Population Density:						
Large MSA	*1,600*	*1,300*	*1,300*	2.2	4.3	7.2
Other MSA	*2,500*	*2,300*	*1,900*	2.9	4.6	3.7
Non-MSA	*1,300*	*1,100*	*1,100*	3.5	5.8	5.4
Parental Education:*						
1.0-2.0 (Low)	*430*	*400*	*330*	4.8	5.0	5.6
2.5-3.0	*1,100*	*1,100*	*970*	3.3	5.4	4.5
3.5-4.0	*1,300*	*1,200*	*1,200*	3.5	5.0	5.0
4.5-5.0	*1,300*	*1,100*	*1,100*	2.4	4.2	4.7
5.5-6.0 (High)	*700*	*600*	*530*	2.1	4.6	6.6

SOURCE: The Monitoring the Future Study, the University of Michigan.

*Parental education is an average score of mother's education and father's education reported on the following scale: (1) Completed grade school or less, (2) Some high school, (3) Completed high school, (4) Some college, (5) Completed college, (6) Graduate or professional school after college. Missing data was allowed on one of the two variables.

Study Web site address:
http://www.monitoringthefuture.org

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